VOL. CCXXXI, No. 3007
PRICE TWO SHILLINGS

Fit "TripleX" Regd - and be safe

THE SPHERE
With which is incorporated "BLACK & WHITE"
NOVEMBER 16, 1957

The SPHERE

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– THE WORLD'S NEWS IN PICTURES

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WARMER WINTER MOTORING

SNUG interior heating, perfect weather-proofing and ventilation, luxurious upholstery and riding-comfort—these are all a part of the fuss which B.M.C. cars normally make of passengers. Testing the efficiency of these features is a regular part of B.M.C. production. And for the driver's special benefit, the B.M.C. range gives immediate cold-starting, demisting and defrosting, excellent visibility and superb road-holding. No wonder motoring with B.M.C. is one of winter's greatest pleasures.

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BACKED BY THE BIGGEST SERVICE ORGANIZATION IN EUROPE

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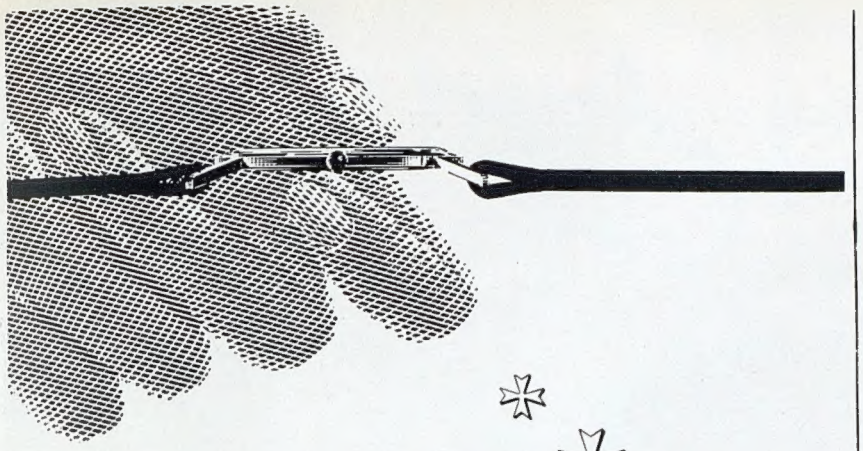

The world's thinnest watch

Thin as a coin, and no larger, the Vacheron et Constantin Extra Thin contains the 120 parts of an intricate precision mechanism.

To technical mastery is here added the quiet beauty of a designer's dream come true.

With this model, Vacheron et Constantin pay tribute to the 200-year tradition that has allowed them to become the world's oldest watchmaking establishment and yet remain a pioneer in contemporary design and styling.

Presented on the occasion of the Vacheron et Constantin bicentenary.

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EXTRA THIN *models are presented in a de luxe leather wallet.*

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Wherever you go you'll meet friendly people with a greeting as warm as the sunshine that blesses each wonderful day.

Blue skies, blue sea and golden sands.

On an ostrich farm at Oudtshoorn.

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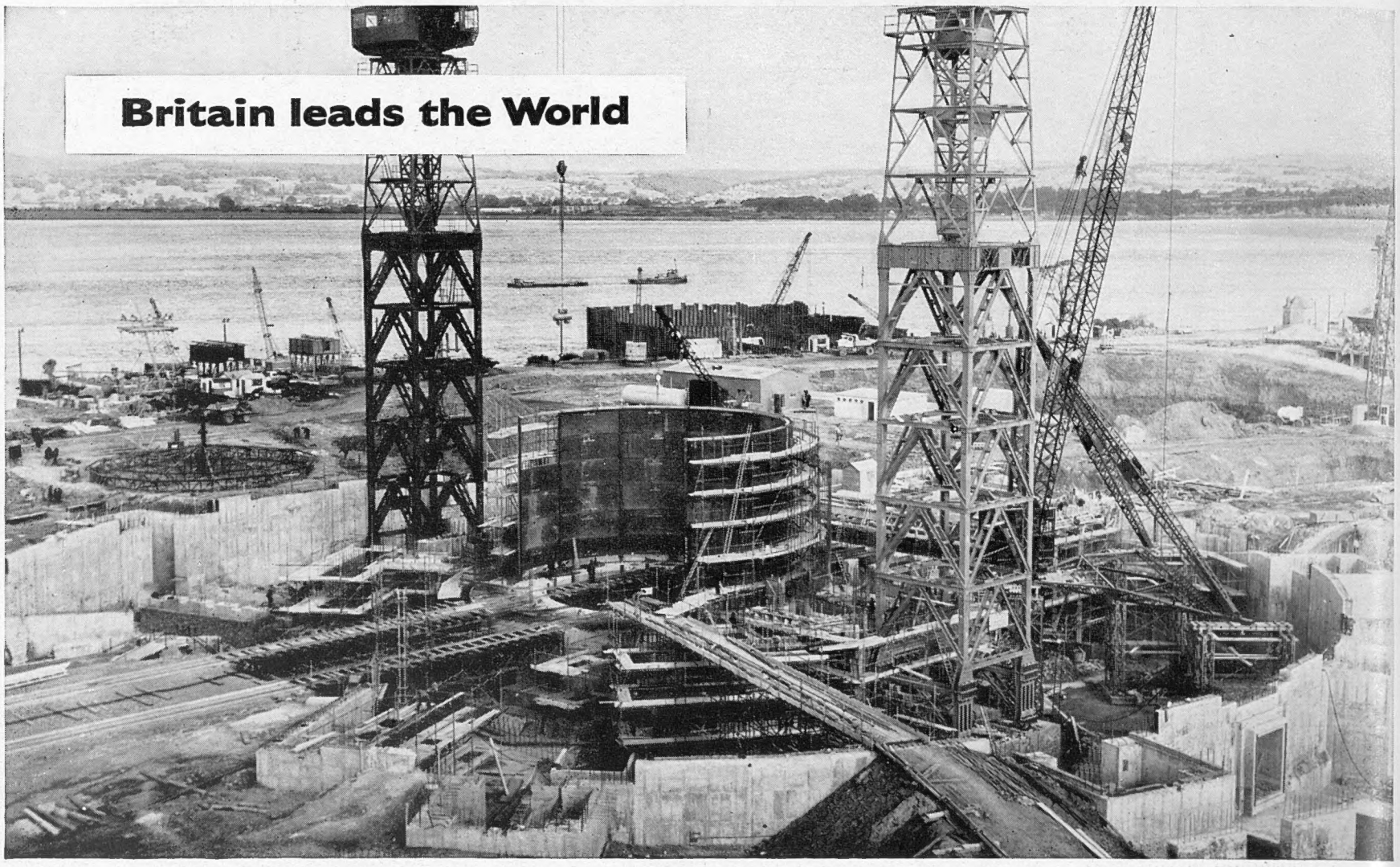
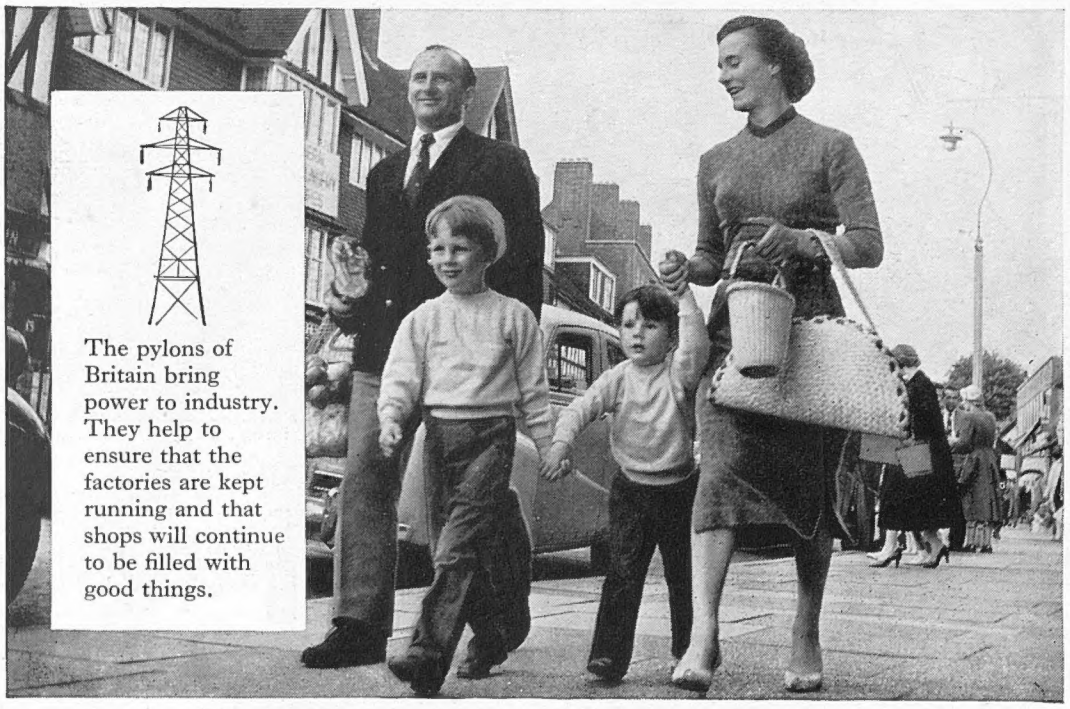


The start of a new era– nuclear power for the nation

Britain leads the world in the application of nuclear power to electricity generation. The material progress of every industrial nation is always accompanied by a proportionate increase in the demand for electricity. The vigorous development of this new source of power is vital to safeguard our full employment and our future prosperity. The demand for electricity in Britain doubles every ten years. The Central Electricity Authority have already met the doubled demand since 1st April, 1948, and have made provision for a similar expansion in the next decade.



The pylons of Britain bring power to industry. They help to ensure that the factories are kept running and that shops will continue to be filled with good things.

To safeguard and expand Britain's prosperity millions of pounds will be spent on the electricity supply industry, on nuclear power stations, on new main transmission lines and on distribution. Construction of nuclear power stations is an important part of the overall plan for meeting the ever-growing demand for electricity.

To bring the increasing supply of electricity to consumers, and to make the supply available to those who are waiting to receive it, construction of new main transmission lines and extension of distribution networks is necessary.

Without this vast electrical development — the new power stations and the new transmission Grids — Britain's prosperity could not be maintained and expanded.

This series of advertisements is being published so that everyone will understand the nation's electric power programme and why it is necessary to have not only electric power stations but also pylons to carry the power where it is needed.

Volume CCXXXI No. 3007

The SPHERE, London, November 16, 1957

The SPHERE

with which is incorporated THE GRAPHIC

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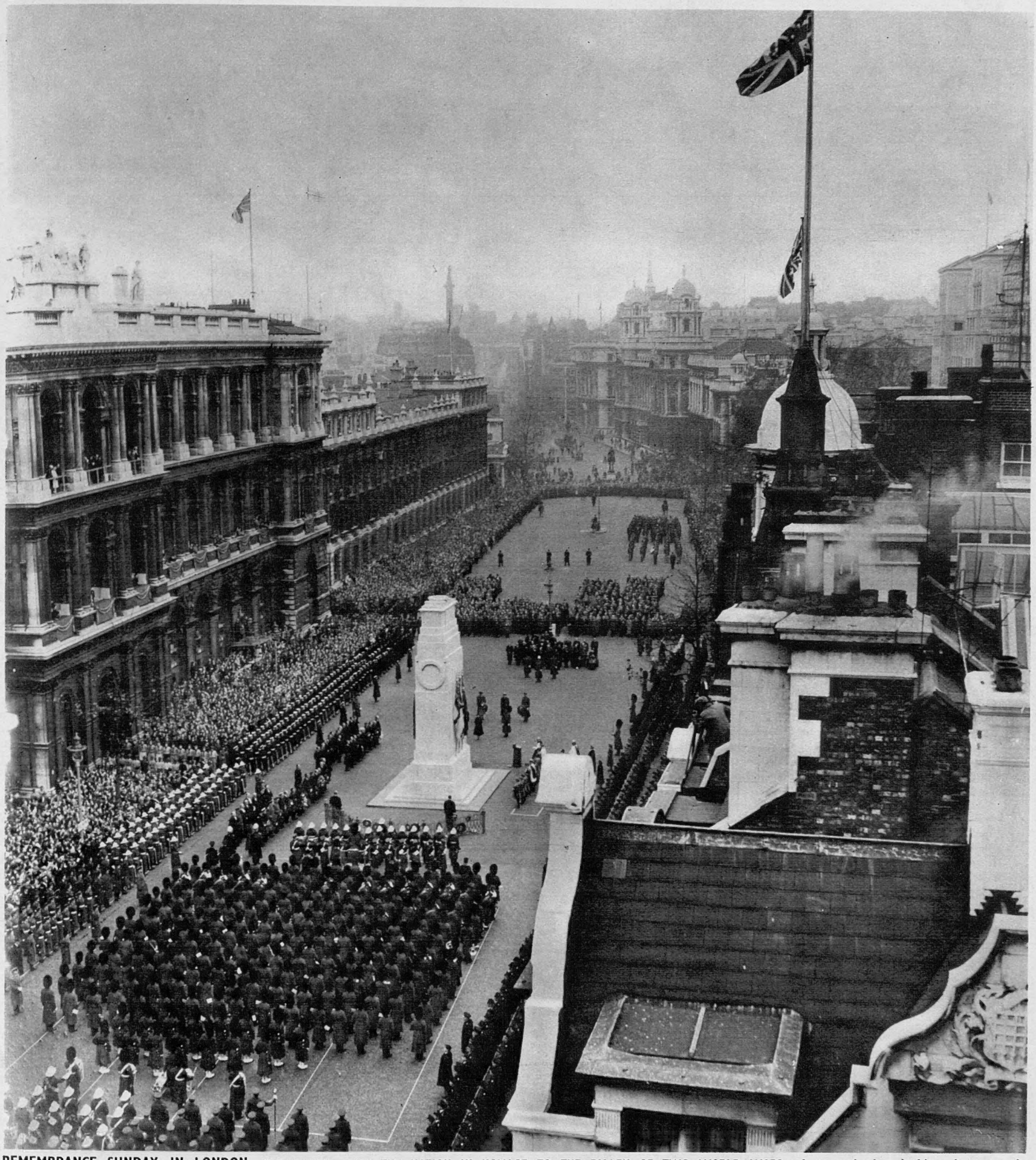


REMEMBRANCE SUNDAY IN LONDON—THE QUEEN LEADS THE NATION IN HOMAGE TO THE FALLEN OF TWO WORLD WARS : A general view looking down on the scene in Whitehall during the short and impressive service at the Cenotaph. The Queen is standing on the far side of the memorial. A short distance away on her left is the Bishop of London with the choir of the Chapel Royal. On the other side are members of Parliament, Service chiefs and Commonwealth representatives.

In the stillness of the two minutes' silence last Sunday morning the nation again remembered the fallen of two world wars. Throughout the country remembrance services were held in churches and at town and village memorials. In London, as usual, the Queen, accompanied by the Duke of Edinburgh, led the nation in homage at the Cenotaph in Whitehall. Shortly before eleven o'clock Her Majesty and Prince Philip walked from the Home Office and stood a few paces in front of the Cenotaph. Close by were the representatives of the Church and Parliament, the military leaders and the representatives of the Commonwealth. Almost immediately the chimes of Big Ben and the rumble of a gun indicated the start of the two minutes' silence. With the firing of another gun the silence was over and the short service was started with the sounding of the Last Post. The Queen laid the first wreath and she, in turn, was followed by her husband and the representatives of other members of the Royal Family and by a number of other dignitaries. The hymn, " O God, Our Help in Ages Past," was followed by prayers, and the service was brought to a close by the sounding of Reveille and the playing of the National Anthem. The other prominent services in London included the remembrance at the tomb of the Unknown Warrior, in Westminster Abbey. On the Saturday evening before Remembrance Sunday the Queen had attended the British Legion's annual Festival of Remembrance at the Royal Albert Hall.

Postage—Inland, 4d.; Canada, 1½d.; Elsewhere Abroad, 4½d.

A MEMORIAL TO SIR IAN HAMILTON IN LONDON : Sir Winston Churchill unveils in the crypt of St. Paul's Cathedral a memorial to General Sir Ian Hamilton, who died in 1947. He is best remembered for the leading part he played in the Dardanelles campaign in the 1914-1918 war.

THE NEW MIDDLE TEMPLE BUILDING : Beneath the awning outside the Quee waits for the arrival of the Queen Mother to perform the opening ceremony six sets of professional chambers and four sets of residential chambers fo

A London Newsletter

195-198, STRAND, W.C.2.

Satellite No. 2.—Shall I try to compete in the chorus of glorification of the scientific triumphs of our age and of the Russians? I think not. The week-end of November 3 displayed before my eyes the progress of the active years of my life. While the second satellite, with its pathetic victim of man's *hubris*, began to encircle our globe faster than thought can follow it, the old crocks of the internal combustion era converged on Brighton. And I knew beyond doubt that I had long ago got off the bus of progress and had not adopted my *nom de plume* too early in life in 1919. I pulled out Sassoon's *Memoirs of a Fox-hunting Man* and *John Gilpin*, illustrated by Caldecott, and realised how little connection I have had long since with this era of progress, how ill-fitted in sympathy and interest to comment on it. That was *my* world, the Edwardian era; and the landscapes of Caldecott, long before my time, supply the picture of the England I have loved, with all its social injustices and ignorance and hidden miseries, and its outward peace and beauty. But it was *real* and carried its high hopes of human betterment within the compass of human comprehension. But this, the age we live in now, is no more real than is a nightmare, and what hopes it may have of human betterment are beyond the appraisal of ordinary men and leave even the scientists anxious and guessing. We have the means to decide what the scientific progress of the last years in ever swifter communications has achieved in fellowship among nations, in human security and contentment! I know that in the last months these vaunted triumphs have made a glorious nonsense of the small matters of every-day existence. How comic it is to think that our Premier, who must steer a wise course in the world of cosmic satellites and make vital policy decisions on nuclear stock-piling, is even now perhaps engaged on the solemn duty of recommending new hereditary title-holders for the New Year Honours! Conservatism gives a grudged inch where Realism demands an ell. What second childishness and mere oblivion half the functions of statesmanship seem to-day as they trail behind them the duties and preoccupations of a dead yesterday while they cope in ignorance and doubt with the new unknown. In this time of transition, the domestic affairs, the conventions, the traditions of civilised nations have shrunk to the littleness and uselessness of infants' games with broken toys. But we must still record them.

"War on the Unions."—The first minor implementation of the Government's expressed promise to combat inflation and the Rake's progress brought out the headlines, "Chaos in industry—will the Unions now reject arbitration?" The Health Service claim sanctioned by the Whitley Council (*not* Arbitration Board) was rejected by the Minister. In terms of money, it was a "trifling" demand. The Minister's veto on it produced a clamour among the Unions which seemed to forecast a period of chaos to the verge of a general strike. In the Minister's view the award was unrealistic in present circumstances, differing only in degree from the lack of realism in the idea of a forty-hour week in industry which would add countless millions to the costs of production and knock us completely out of world markets at a time when competition was never fiercer and success never so vital. But before now a trivial incident has set off a mighty long war. Hard words and vicious threats are not always followed by warlike actions. Nevertheless, without going into the rights and wrongs of the Health Service-claim veto, we may well ask ourselves whether, in the present state of the nation, a traditionally Conservative Government can hope to succeed in its efforts to put right our economic malaise. It is the old question of "Two Nations." Majority co-operation is denied the Tories in any drive towards a realistic campaign against inflation, and I ask myself whether to-day such co-operation would be possible under Socialist rule. If I remember rightly, Sir Stafford Cripps, a brave, patriotic, independent and far-sighted Minister, tried to bring order and realism into our economy during one of our crises, and he had the co-operation of the Tory opposition. But can the present Tory Government rely under present conditions on any, even partial, co-operation by the Opposition, let alone the Unions, the *pars major* of the Socialist Party? I very much doubt it. It is the traditionalism of Conservatism to-day, expressed very often in trivial matters, that causes as much antagonism to the present Government as does the realism and logic of their specifics and policies.

The Little Red Rags of Toryism.—I don't know how Mr. Gaitskell in power would deal with a universal demand for a forty-hour week at a time like this. He might, I suppose, surrender to such a claim if it were seriously put forward and hope for the best while expecting the worst. But if he courageously decided to reject it or postpone it, he would have the invaluable help of the Tory Opposition. As things are to-day—the "two nations" in two fiercely opposed camps—Mr. Macmillan cannot hope for that help. And why? Because (at least in my befogged mind) the trivial manifestations of conventional Toryism, with its *nostalgie* for the surviving age of Privilege, antagonise and render suspicious the Socialists and the "workers" more than the stark logic concerning our economic road to ruin can impress them. It may seem a trivial contribution to a solution of the puzzles of our unhappy age to suggest that such trifling adherence to traditional Toryism could in the smallest degree assist to keep the nation in two frozen camps, but so it seems to me, and I think the only Tory Government that could succeed in unfreezing the other camp even partially is one with a Premier who himself accepts and convinces his colleagues of the need, *pro tem* and *ad hoc*, of putting in their pockets these little red rags to the bull of Opposition. Our democracy, after all, is still half-baked and half-educated, and little things impress our minds, while broad policies remain beyond our understanding or interest. We live in our own pockets and for the day, and our prejudices are created by the gossip in our street. The Queen's Speech, outlining the programme of legislation, hardly touched on those matters which will find the "two camps" most bitterly opposed.

Telephone Tapping.—The Committee of three Privy Councillors who have examined the vexed question of tapping private telephone conversations in their report unanimously found that Lord Tenby made an error in the Marrinan case by making the transcriptions available to outside bodies, the Bar Council and Benchers of Lincoln's Inn. Such an error, they recommend, must never be repeated. They are unanimous in finding that the practice should be continued in its already highly selective form, namely, only where there is good reason to believe, on evidence weighed by the Home Secretary, that a serious crime or security interest is involved; and disclosures, if any, must be communicated to the fewest possible. Mr. Gordon Walker recommended a still more restricted use: For direct counter-espionage, the protection of State secrets and the employment of Communists or Fascists on vital State work and for detecting most extreme crime. The committee agreed that in the past the practice had succeeded in detecting many major crimes, Customs frauds and dangers to State security. We may assume that in future, in the realm

RATES OF SUBSCRIPTION TO "THE SPHERE"

Orders for subscriptions to THE SPHERE *should be handed to any bookstall or newsagent, or addressed to the Subscription Department,* THE SPHERE, *Ingram House,* 195-198, *Strand, London, W.C.2. The rates for* 12 *months, including Christmas Number, for Great Britain and Eire, are* £6 6*s.*; 6 *months and Christmas Number,* £3 5*s.* 6*d.*; 6 *months without Christmas Number,* £3 1*s.*; 3 *months (no extras),* £1 10*s.* 6*d. For Canada the rates for the same periods are* £5 14*s.* 6*d.*; £2 19*s.* 6*d.*; £2 15*s.*; *and* £1 7*s.* 6*d. For the U.S.A. the rates for the same periods are* $18.50; $9.50; $9.00; *and* $4.50; *and for elsewhere Overseas* £6 8*s.* 6*d.*; £3 6*s.* 6*d.*; £3 2*s.*; *and* £1 11*s. All terms above include postage.*

Elizabeth Building in the Middle Temple in London a group Standing on the site of the former library, the building contains Masters of the Bench. The architect is Sir Edward Maufe, R.A.

THE DEDICATION OF THE WESTMINSTER FIELD OF REMEMBRANCE: Canon Stancliffe, the Rector of St. Margaret's Westminster, dedicates the Empire Field of Remembrance for 1957. To the right stands the Chief Scout, Lord Rowallan. In this jubilee year of the movement, scouts played a special part in Remembrance services.

of crime detection, it will be used to avert the most serious crimes by gangs, known killers and criminal lunatics. The general public will not quarrel with that. The privacy of the innocent, and even "moderately" innocent, is practically assured. Still, the average of yearly "interceptions" over twenty years is rather high, has vastly risen since 1939, and in 1955 rose to double the average figure of the war years—231 telephone taps, 205 letter-steamings. Drugs and obscenity quests account for most of the letter-openings, and the Customs have probably accounted for most of the "objectionable" but by no means unnecessary invasion of privacy.

Chief Causes of Road Accidents.—Most of our modern planning is based on statistics, frequently compiled and compared. I always study carefully the statistics of traffic accidents put out by the Chief Constable of my own county. By far the largest proportion of such accidents were apparently, in the last four months, due to "misjudging clearance, distance or speed," to "stopping suddenly" and to "losing control." For example, "misjudging clearance, etc.," caused 192 accidents against 19 attributed to "excessive speed." Therein perhaps is seen the weakness of statistics. "Excessive speed" might well be a cause of "misjudging speed" and "clearance" also. Fatigue and drink are shown as negligible causes. Both might cause misjudgment. "Crossing a road junction negligently" comes fourth and "turning *right* negligently" is, not unnaturally, ten times more dangerous than turning left. "Dogs on the highway" were the cause of 109 accidents with 10 casualties to persons. In the four months under review there were 28 prosecutions for dangerous driving and 197 for careless driving. In those four months, in half of one county in England, I wonder how many cases occurred of careless driving *not* brought to book: 2,000? 10,000? The police can't be everywhere, and most of us dislike or are too lazy to report the car numbers of delinquent drivers.

How Safe is Your Home?—I read this caption in an advertisement of a periodical, containing an article on accidents in the home. It seems that every year 2,000,000 householders in Britain become hospital cases as a result of accidents in their homes and 8,000 die. Compared with one's home, the coalmine, the factory, the plane, the ship, the car, the train, are safe . . . as houses! "*Safe as houses!*"—What an odd, outmoded phrase. In these last tempestuous days, as I lay shaking in bed, I wondered quite often how safe was my home. All round it the lawn and drive were strewn with fallen boughs, and for years past my amateur efforts have been concentrated on pushing back or propping the loose tiles on my Victorian roof. Rotten as that roof is, after eighty years of existence, it appears to fare better than those newly finished in modern housing estates—at Hatfield New Town to wit, where the flat aluminium roofing was stripped off like brown paper by a not abnormal autumn gale, leaving many families homeless and poorer. I presume some swift and serious probe will be made into the methods and materials of these New Town planners and builders.

"Say It With Flowers."—No reason, we must assume, exists why, because we appear to totter on the verge of an atomic crater, we should live like cavemen before our time. For a while longer, at any rate, we may enjoy a few of the less expensive sweets of civilisation and nature, and foster the art of exploiting them. This reasoning has produced another sort of Chelsea Flower Show, art applied to nature. The Floral Arrangement Association of London and the Home Counties—a whale of a title—opened at Chelsea Town Hall on November 14 and 15, and it will prove no exaggeration to claim that it will have all the excitement of an art show. Christmas table and home decoration will be the chief motif, and it will be in evidence from the sublime to the meticulous and minute. The movement was started only in 1949 in Dorset and has grown and broadened over the country. As a part of the takings will go to the Gardeners' Benevolent Institution, all lovers of flowers and of beauty will have good cause to note and keep the dates.

"Two Nice Little Boys."—A photograph of two very nice little boys, who had obviously used a "nice cake of soap," caught my eye last week. They were standing, as schoolboys do, before a blackboard on which was set out a mathematical problem which seemed rather above English private-school standards, and that fact led me to read the legend. These two little boys (believe it or not!) were grave and mature professors of physics who had just been awarded the Nobel Prize for Physics. Their work has been done in American universities, though both were born in China. A Chinese man spends most of his life looking like a small boy. If he attain the psalmist's limit, he suddenly succeeds in looking far older than his Western contemporaries. This is puzzling and may in part account for a foolish habit, long practised if now in dis-use, of underrating the potentials of public men in Chinese active life, while accepting the wisdom of their sages and philosophers in retirement. I fancy that the hair on their faces is slower to grow than on Western faces. Their sages can do wonders with bell-rope moustaches in old age.

THE OLD STAGER

A ROYAL GIFT FOR THE ROYAL SOCIETY OF ARTS: Prince Philip is seen standing at the lecture bench which he presented to the Royal Society of Arts at John Adam Street, in London, last week. To the right is the Chairman of the Council of the Society, Sir Alfred Bossom, Bt., M.P. The bench was designed by Professor R. D. Russell, R.D.I.

CIVILIANS FOLLOW THE ARMED FORCES: A mass of workers marches through Red Square during the Moscow parade on the fortieth anniversary of the Bolshevik Revolution. Centre background is St. Basil's Cathedral. On right is the Kremlin, and in front, on the Lenin-Stalin Mausoleum, stand the leaders of Russia and other Communist countries.

FORTY YEARS ON: A portrait of Lenin looks down from the wall of the GUM Department store on Red Square. A squadron of rocket launchers passes below it. There was little unexpected in the display of Soviet modern military might in the capital of Russia.

SHORT-RANGE GUIDED MISSILES: They are probably ground-to-ground or ground-to-air types. They were among the Soviet rockets shown for the first time. Like many Western types, they are tactical weapons capable of carrying atomic warheads.

THE TWO LARGEST ROCKETS IN THE PARADE: A section of the second can be seen beyond the nose of the first. Each is about 75 ft. long. Experts estimate their range to be up to 500 miles and they could be used effectively against Western Europe or Scandinavia. A fly-past which had been arranged for the parade was cancelled owing to the low clouds and fog.

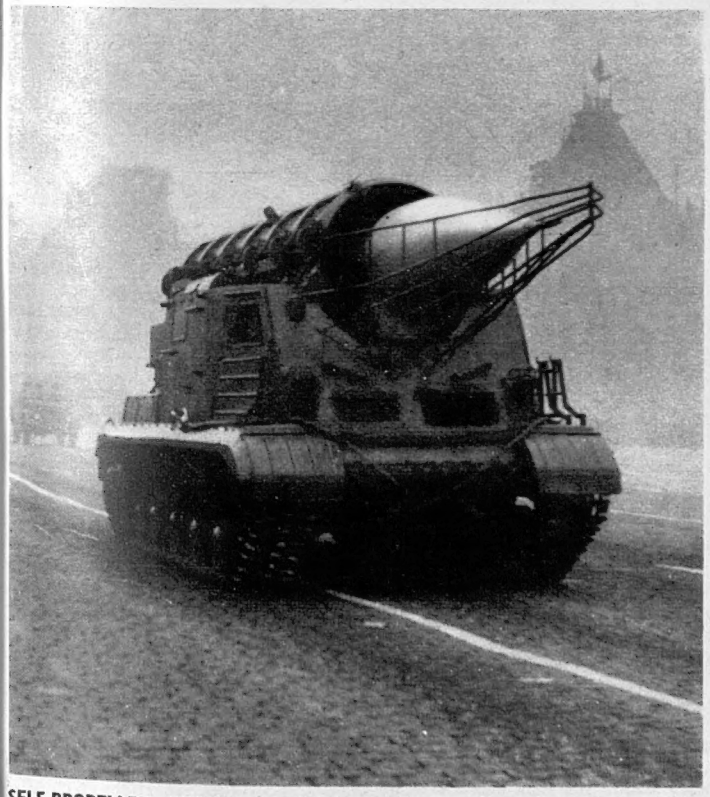
In the Soviet show of force through the Red Square, in Moscow, several new weapons were shown in public for the first time. None of them was sensational. The general impression was that the Red Army is being kept as up to date as any military force in the world and, like other countries, the latest and most destructive weapons are still on the secret list.

On the tribune above the Lenin-Stalin Mausoleum, Mr. Khrushchev was surrounded by Russian colleagues and representatives from other Communist countries, the most important being Mao Tse-tung. Marshal Tito was not present. At the end of last month he cancelled all visits abroad owing to a "sudden attack of lumbago." Marshal Malinovsky, successor of Marshal Zhukov at the Ministry of Defence, made the speech at the review. There were naturally references to the space satellites and Soviet technical advances. Much of his theme was highly aggressive in tone, being directed against the "imperialism" of the West. This contrasted with Mr. Khrushchev's speech on the previous day to the Soviet Presidium, which was generally regarded as conciliatory.

ROCKETS IN RED SQUARE

Soviet Arms Displayed in Moscow for the Fortieth Anniversary of the Revolution

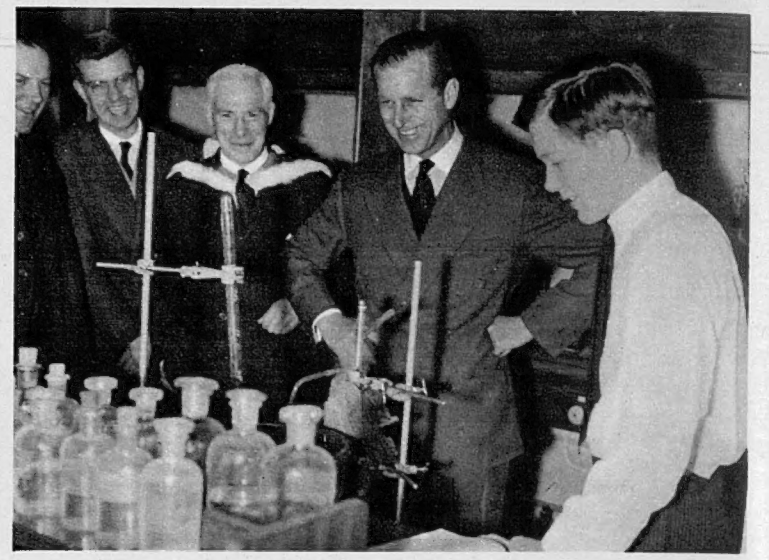
MOUNTED MISSILES PASS THE SALUTING BASE: Rockets on tracked vehicles turn off after passing the Lenin-Stalin Mausoleum. In the group on the tribune are Mr. Khrushchev and Marshal Bulganin with Mao Tse-tung and representatives from Communist states. The notable absentee was Marshal Tito.



SELF-PROPELLED MODERN WEAPONS: Their appearance in the parade takes them off the Russian secret list. Undoubtedly the Soviet Union possesses more destructive weapons which are still being kept secret.

AN ATOMIC CANNON ?: It is a heavy gun with an outside diameter estimated at 16 ins. and an inside diameter of about 13 ins. A commentator on Moscow radio described it as a jet-type gun. It is probably intended to fire nuclear shells, but Western observers regard its design as rather heavy for its carriage and recoil.

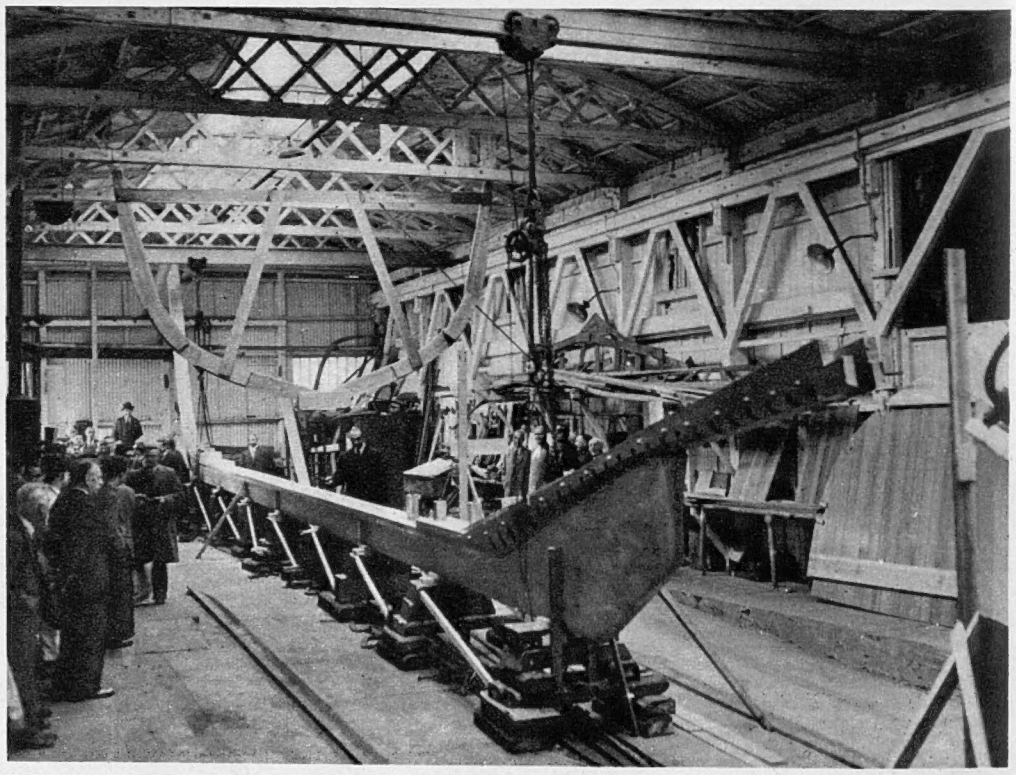
THE NEWS IN PICTURES



A ROYAL DAY FOR RUTLAND: The Duke of Edinburgh stops to watch an experiment in progress during his visit to the chemistry laboratory at Uppingham School. Accompanying the Duke is the Headmaster, Mr. Martin Lloyd; conducting the experiment is Robert Greenly. The visit to the School was made during the Duke's round of engagements in Rutland and Leicestershire. He first visited the open prison at Ashwell and then went on to Oakham, where he presented his horseshoe to the castle and visited Oakham School. At Exton, he inspected the new excavator of the United Steel Companies Ltd., and at Uppingham inaugurated the new science building and visited the Memorial Hall.

THE RETIRING GOVERNOR OF CYPRUS RETURNS HOME: Field-Marshal Sir John Harding is seen with his wife on arrival at London Airport from Nicosia. At a Press Conference, Sir John emphatically denied that there had been any dispute between him and the British Government. He said: "I have not at any time had any difference of opinion with the Colonial Secretary or with the Government. We have never been out of step."

A NEW HORSESHOE FOR OAKHAM: Prince Philip is looking at the horseshoe which he has presented to the castle. He was observing the tradition that every member of the Royal Family and every peer who visits Oakham must give a horseshoe to the castle.



A NEW FLOATING CLUB FOR SEAMEN: Senhor Pedro Pereira, the Portuguese Ambassador, is laying the keel of the new *John Ashley* which, when completed, will be a new floating church and recreation centre for seamen. The ceremony took place in the Hampton-on-Thames shipyard of John Thornycroft, where the vessel is under construction. She will replace a converted Admiralty fishing-boat at present used in a similar capacity. Named after one of the first pioneers of the Missions to Seamen movement, the boat will be capable of accommodating up to sixty persons.

AN AMERICAN MISSILE FIRED INTO SPACE AND RECOVERED INTACT: President Eisenhower leans on the nose cone from an experimental missile which, he said in a television broadcast, had been fired several hundred miles into outer space and had been recovered intact. In what was described as one of the most important speeches he has yet made, the President confirmed that the United States had now solved the critical ballistic missile problem of returning a missile warhead from space on to a target. He said that an adviser had been appointed to help advance the nation's scientific defence programme.

THE NEWS IN PICTURES

THE CROWN PRINCE OF YEMEN IN LONDON: Saif al Islam Mohammed Albadr, the Crown Prince of Yemen, arrived in London last Sunday at the invitation of the British Government. He said that he hoped his visit would start a new era of understanding and progress in Anglo-Yemen relations "on the basis of mutual respect and appreciation of the legitimate rights and interests of both parties."

A TORNADO IN TEXAS: Thousands were left homeless when a tornado struck at the small town of Groves, Texas, last week, killing two people and seriously injuring eleven others. This picture shows an aerial view of the destruction. The house in the centre has been lifted off its foundations and now blocks the street. More than 160 homes in the town were destroyed or badly damaged as a result of the tornado.

A PRIEST'S SILVER JUBILEE: A procession of Roman Catholic clergy walks through the streets of Plymouth on its way to the Cathedral to celebrate the sacerdotal silver jubilee of the Roman Catholic Bishop of Plymouth, the Rt. Rev. Monsignor Cyril Restieaux. He was ordained in 1932 after training at the English College, Rome, and the Gregorian University. Clergy came from all parts of the West of England to attend the High Mass in Plymouth Cathedral. After the service, Bishop Restieaux was presented with a cheque for £2,000, subscribed by Roman Catholics in the area. He intends to devote half of this sum towards the training of young men for the ministry.

A UKRAINIAN CHURCH CEREMONY IN LONDON: Roman Catholic priests kiss the hand of Dr. William Godfrey, the Archbishop of Westminster, after his installation as first Exarch of Ukrainians in England and Wales of the Byzantine-Slavonic rite. The ceremony and Mass in the Ukrainian rite took place at the Ukrainian Church, Saffron Hill, in London. The Mass was sung by Archbishop Bushko, who hitherto has had the pastoral care of 26,000 Ukrainians in England and Wales.

STATE VISIT OF THE IRAQI CROWN PRINCE TO FORMOSA: *Above*—Crown Prince Abdul Ilah of Iraq places the sash of the Hashemite Order on Madame Chiang Kai-Shek, watched by Generalissimo Chiang Kai-Shek (centre). Prince Abdul called on Chiang Kai-Shek during his eight-day state visit to Taipei, in Formosa. *On right*—Prince Abdul (centre) is seen arriving at Taipei Airport at the start of the visit, where he was greeted by Vice-President Chen Cheng (right). The Crown Prince intends to visit several other South-east Asian countries before returning to Bagdad in a few weeks' time.

THE NEWS IN PICTURES

HENDON AERODROME CLOSES FOR ROYAL AIR FORCE FLYING: Air-Marshal A. McKee, Air Officer Commanding-in-Chief, Transport Command, and Group-Captain P. W. Stansfeld, the Station Commander, examine a Sopwith Camel of the First World War at the airfield in North London. Behind them is a modern Devon Transport of the R.A.F. The picture was taken last week on the day on which Hendon was closed as an R.A.F. station. Old and new types of aircraft were displayed to recall the aerodrome's long history. It was opened in 1910. For many years between the wars it was the scene of the annual Air Display. Since 1945 it had been the home of the R.A.F. Transport Command's Metropolitan Communications Squadron. Now it is too small for jets and large piston-engined aircraft.

A LAST LOOK AT A FAMILIAR SCENE: A De Havilland Devon Transport makes a final flight over Hendon. The Metropolitan Communications Squadron, which often flies V.I.P.s, has moved to a new base at Northolt airfield.

THE PRIME MINISTER AT THE INSTITUTE OF DIRECTORS: Mr. Macmillan is being applauded after speaking at the annual conference of the Institute in the Festival Hall in London. On his right is Lord Chandos, President of the Institute, and on his left Major-General Sir Edward Spears, a former President. Mr. Macmillan outlined a seven-point plan to combat inflation, which would require "a little more self-discipline all round" and need closer co-operation between employers, unions and Government working in real unity.

THE REPORT ON THE WINDSCALE NUCLEAR MISHAP: At a Press Conference in London are, from the left, Sir Harold Himsworth, Secretary of the Medical Research Council; Sir Edwin Plowden, Chairman of the U.K. Energy Authority; Sir William Penney, Director of the Atomic Weapons Research Establishment, and Chairman of the Windscale Inquiry; and Sir John Cockcroft, Director of Harwell. They were discussing the Inquiry's Report into the accidental escape of radiation at Windscale last month.

A BUS ON THE BRINK OF A HIGH DIVE: A crowd stares up at the vehicle hanging precariously over the balustrade of a bridge high above the outskirts of Izmir (formerly known as Smyrna), the ancient port in Asiatic Turkey. It had been in collision with another bus. A young mother leapt in panic from it with her baby in her arms. She was killed and the baby injured. There were no other casualties.

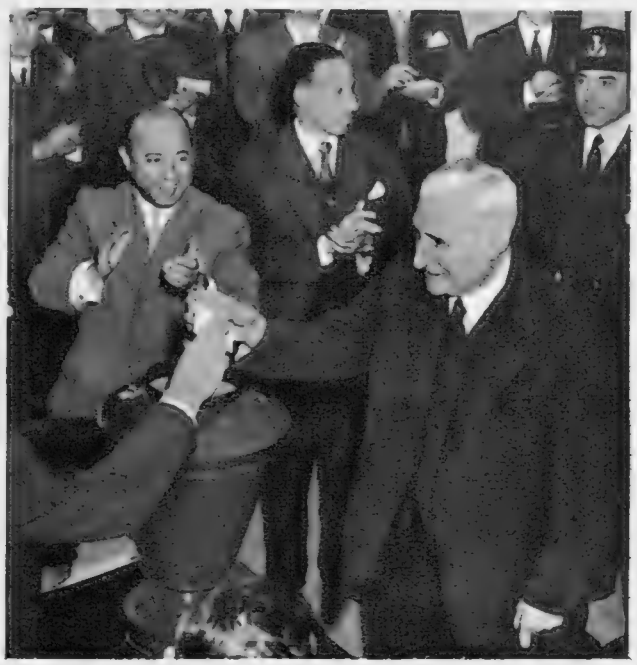
A SHEEP SALE BENEATH AN ANCIENT MONUMENT IN WILTSHIRE: The animals are examined in their pens at the Salisbury Sheep Clearance Sale at Old Sarum, outside the city. In the background is the mound of Old Sarum surrounded by its ramparts and moats. Here was the Norman castle with the Cathedral near-by, from which Bishop Poore moved in 1217 to build the Cathedral of New Sarum and found Salisbury.

THE NEWS IN PICTURES

STATE OPENING OF THE ETHIOPIAN PARLIAMENT: The Emperor of Ethiopia, Haile Selassié I, stands in front of the throne while making the speech at the state opening of the first Ethiopian Parliament to be elected.

ETHIOPIA'S LEGISLATORS HEAR THE GOVERNMENT PROGRAMME: The Senators and Deputies are standing at the benches of the House of Parliament in the capital, Addis Ababa, listening to the inaugural speech by the Emperor, Haile Selassié I, at the opening of the first-ever elected Parliament. During his speech the Emperor said that a general development plan for Ethiopia had been prepared to cover the next five years. He also announced that an expert study of the numerous problems concerning the Nile had been arranged.

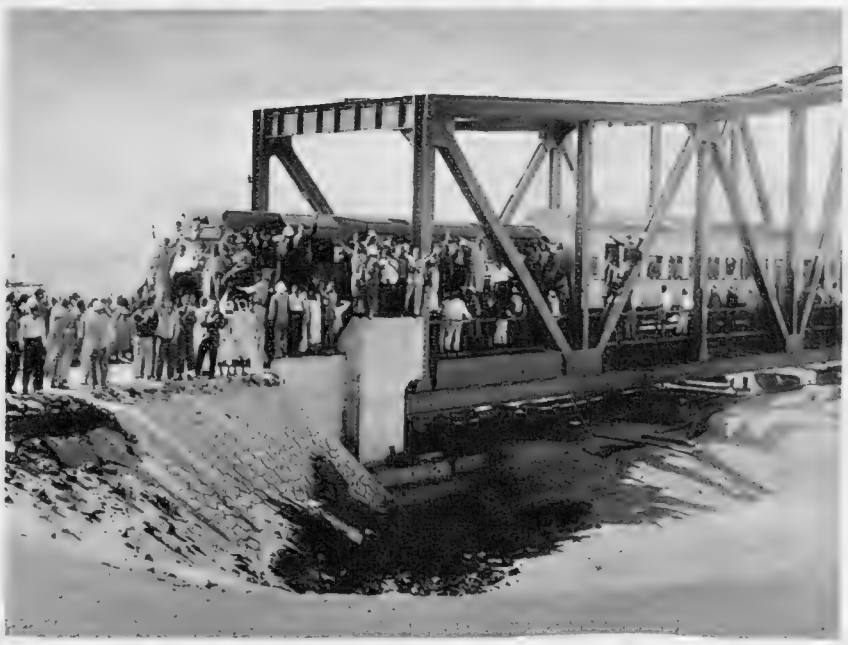
A PORTUGUESE PARTY IN LONDON: His Excellency Dr. Pedro Theotonio Pereira, the Portuguese Ambassador, pours from a decanter while students in national dress look on at a party at the Casa de Portugal, in the West End of London. The occasion was held to celebrate the publication of a new book on the history of port wine. The host was Senor Antonio Mendes.



On left—

THE PRIME MINISTER OF PORTUGAL CASTS HIS VOTE: Dr. Antonio de Oliveira Salazar places his vote in the ballot-box at a polling station in Lisbon during the General Election in Portugal. Every seat in the new National Assembly was won by Dr. Salazar's National Union Party. Opposition candidates contesting the election represented only a small group of the body of those opposed to the Government. This was because the bulk of the Opposition had decided to boycott the election on political grounds.

THE SOVIET LOAN FOR SYRIA: Mr. P. V. Nikitin (on left), the Vice-Chairman of the Russian Foreign Economic Relations Committee, signs the Soviet-Syrian Economic Pact in Damascus. Seated in the centre of the picture is Mr. Sabri Assali, the Syrian Prime Minister. On the right is Mr. Khaled El Azm, acting Syrian Defence Minister, who negotiated the agreement during a visit to Moscow this summer. It provides for an amount of about £35,000,000, including the supply of Russian equipment and experts for Syria. Many and various projects fall within the scope of the Economic Pact, including railway construction, dams and irrigation. A geological survey of the country will be completed and substantial improvements will be made to the port of Latakia.



A LINK OVER THE SUEZ CANAL RESTORED: A Gaza-bound passenger train surrounded by cheering Egyptians crosses the El Ferdan bridge, a few miles north of Ismailia, on the Suez Canal. This was the first train to pass over the bridge since the Anglo-French intervention on the Canal a year ago, when it was blown up by the Egyptians as part of their counter-action. The task of repairing the bridge and restoring the railway tracks has been carried out entirely by Egyptian engineers. The actual clearance of the destroyed central section, which blocked the canal passage, was carried out in January by a German salvage team operating under the United Nations flag. It was among the first obstacles placed by the Egyptians to be cleared.

A ROYAL NAVAL HELICOPTER LIFTS A TRUCK: The vehicle being carried by a Westland Whirlwind during a demonstration at the Royal Naval Air Station, Lee-on-Solent, is a Citroen 2CV, which weighs only 1,200 lb. As a result of this test it may be given an official trial with a view to being adopted by the Royal Marine Commandos. Mr. Duncan Sandys, the Minister of Defence, was present at the demonstration of naval helicopters.

AMERICA'S FIRST COMMERCIAL JET-POWERED AIRLINER: The Boeing 707 Stratoliner is rolled out from the Company's production plant at Renton, near Seattle, Washington. It is the first of these long-range pure-jet airliners to be structurally completed and the work has been carried out precisely on schedule. The first production aircraft will be delivered to Pan-American Airways, and is expected to be in service early in 1959.

BRITAIN'S V.T.O.L. AIRLINER MAKES ITS INITIAL FLIGHT: The Fairey Rotodyne takes off from White Waltham airfield, near Maidenhead. Claimed to be the first of its kind in the world, it is a combination of helicopter and fixed-wing aircraft. Take-off and landing are made vertically with the rotors. In the air it flies forward with its wings in orthodox fashion. *On left*—Beneath the wings of the rotodyne are two Napier Eland turbo-prop engines. At the tips of the rotor blades are pressure jets. For take-off compressed air from the Eland engines is piped through the blades and is burned with fuel in the tip-jet units. When the required height is gained, the engine power is transferred to the forward-facing air-screws and the Rotodyne flies as an orthodox aircraft, with the rotor "free-wheeling," and sharing the lift with the fixed wings. Power is transferred again to the rotor for landing. The V.T.O.L. (Vertical Take-off and Landing) airliner can carry forty-eight passengers or 4½ tons of freight at a cruising speed of 185 m.p.h. for a range of 400 miles. It was designed around a specification drawn up by British European Airways, and Faireys were given a contract to develop two prototypes.

ELEGANCE AND EXPERIMENT

...raft of Various Shapes ...r Construction or on Test ...itain, America and Russia

THE BOEING 707 PREPARES TO MAKE ITS DEBUT TO THE PUBLIC: Finishing touches are being put to the Stratoliner in the background preparatory to its being rolled out from the Boeing plant. In the foreground, work proceeds on the second of these aircraft scheduled for completion. Boeing 707 No. 1 will undergo final functional testing before starting on its test flights. The Stratoliner is a direct development from the Boeing B-47 Stratojet bomber series and will have a speed of 600 miles an hour. It is powered by four Pratt and Witney turbo-jet engines.

A SOVIET "FLYING BEDSTEAD": A Russian prototype for a vertical-take-off aircraft is in the air over an airfield in Moscow. The picture, which was recently published in the Soviet Press, was stated to have been taken at a demonstration some months ago. The caption reported that great progress had been made by Russia in developing this type of aircraft.

A RUSSIAN HELICOPTER CLAIMS A WORLD RECORD: The aircraft is the MI-6 twin turbo-jet helicopter which at the end of last month was reported to have flown at a height of 7,500 ft. with a commercial load of over 26,000 lb. The Russians claimed that this comfortably beat the previous international record in this class of performance—flight at 6,500 ft. with 13,000 lb. The helicopter is presumed to be the latest production by M. L. Mil', the Soviet designer.

THE BRISTOL AIR DISASTER

Fifteen People Killed When the Britannia Crashes

At about noon on Wednesday of last week a prototype Bristol Britannia airliner approaching Filton Aerodrome crashed in a wood at Downend, north of Bristol. All fifteen persons on board were killed, including Mr. E. H. Statham, the assistant chief test pilot of Bristol Aircraft, who was piloting the plane. Nearby houses in Overdale Road, Downend, were showered with wreckage, but the only civilian casualties were two women who were taken to hospital with shock, and a small boy who was slightly burnt.

The aircraft, which was the first prototype of the 300 long-range series, had taken-off on a routine test flight two hours earlier. As the aircraft returned to land the control tower heard the pilot give out a distress signal. Eye-witnesses say that the Britannia came in at a very low height, struck a farmhouse chimney, and the roof of a stable, then fell into the wood where it burst into flames. There were several explosions before the Britannia finally disintegrated. It is believed that the pilot made a valiant attempt to avoid crashing on to the nearby large housing estate.

Mr. Peter Masefield, the Managing Director of Bristol Aircraft, was lunching at Buckingham Palace when he heard of the accident. He immediately flew to Bristol, piloting his own Chipmunk. A Bristol Sycamore helicopter hovered over the wreckage while the bodies were removed, and an emergency headquarters was established in the garage of a house for the collection of fragments which may help to discover the cause of the accident.

On right—

AN AERIAL VIEW OF THE DISASTER: The remains of the wrecked Britannia can be seen scattered through the wood to the row of houses in the middle distance.

DAMAGED HOUSES NEAR THE ACCIDENT: Parts of the aircraft were blown by the force of the explosion into several back gardens in Overdale Road, Downend. *On right*—This house had a very narrow escape when one of the Britannia's turbo-prop engines came to rest outside the kitchen door.

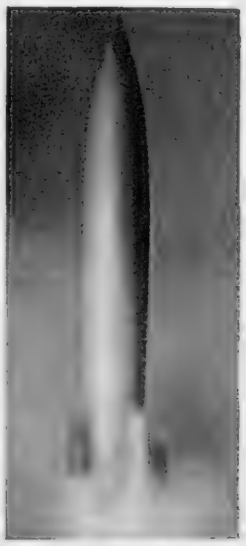
SPUTNIK SURVEY

Soviet Ideas of Today and Tomorrow for Travel to the Moon

With Drawings by JOHN W. WOOD

A CONSIDERABLE achievement of the Russians has been to give two new meanings to the word Satellite within ten years. But whereas the political satellite is to be kept as near to the Soviet Union as possible—the more restricting the orbit, the better—the scientific satellite should be sent further and further into space. With the celebrations of the fortieth anniversary of the Bolshevik Revolution both types of satellite have been much in the news. Understandably, most of the world has been paying more attention to Sputniks in the distant atmosphere than to groups of Communists on the roof of Lenin's tomb.

The main problems for Sputnik makers are three. First, to launch the device; secondly, to keep in touch with it on its journey and, thirdly, to recover it or bring it back to the earth. A great deal has been written about how this can be done and the Soviet Union has published a certain amount of information. At the Soviet Film Festival in London a film called *Red Moon* has been shown. It is certainly full of ideas but whether they are, in fact, the ideas along which the Russian scientists are currently working is another matter.



A DOG-CARRYING ROCKET: It has just been shot from its launching frame and is one of the experimental missiles from which the Russians claim the dog was recovered. The picture is from the Soviet film on space travel entitled *Red Moon*.

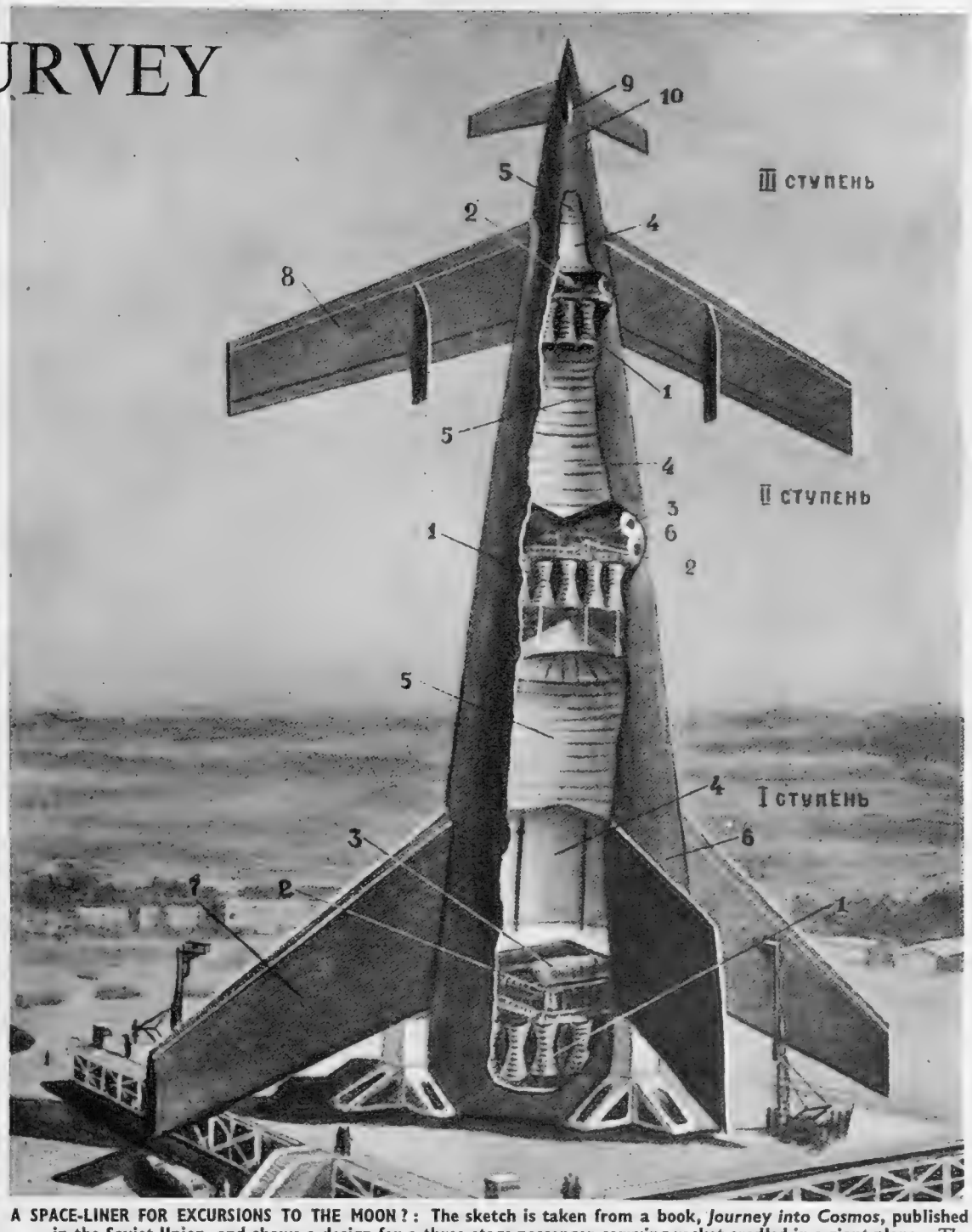
In the launching apparatus the aim is to combine simplicity in design with the means of providing the enormous propulsive power necessary to shoot the satellite up into space. The Russians have sometimes used gantry launchers. However, the principle of a three-stage rocket encased in a kind of airplane body is regarded by many experts as too cumbersome. There are reports that Soviet scientists have invented a new fuel for the Sputniks.

Once in space and settled on its orbit round the earth, the satellite keeps contact with ground stations by the radio transmitters which it carries. Laika, the now immortal space dog in Sputnik II, is harnessed to instruments from which continuous reports of her state of health and condition are wirelessed downwards—in code. Recordings are made in the earth reception stations by cardiographs and other electrical devices. This method should prove effective for keeping in contact with human beings in space satellites.

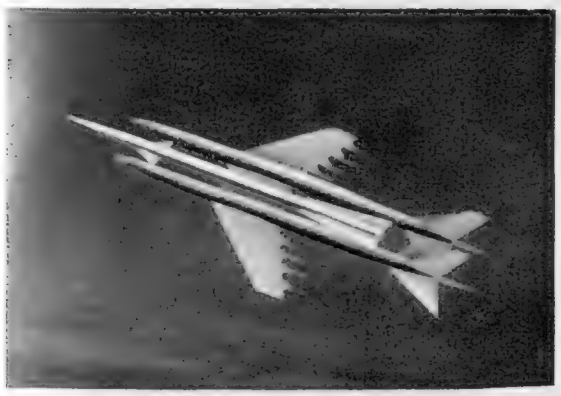
The greatest difficulty is almost certainly the recovery of the satellite. On the following pages an artist has drawn his impressions of how this might be done and Mr. Kenneth W. Gatland, F.R.A.S., has given a brief description of the method. The vital operation is throwing the satellite out of its orbit. Once this has been done, the descent can be made in recognised stages.

Soviet dogs are understood to have been sent up in rockets to altitudes of possibly sixty miles from the earth. Laika at one time was reported to be 900 miles above the earth. Yet whatever the distance the principle of the descent should remain the same.

From space dogs to space men—many people believe that the progression will soon be made. Yet in spite of the enormous stride science seems to have taken within the last few weeks, there are those who warn that while it may be possible in the near future to land an unmanned satellite on the Moon, it will be a long time before trips to the lunar mountains will be available for human beings. Indeed, for the present concern of the human race the political satellites may be as important as the scientific species. (*Further pictures on following pages*).

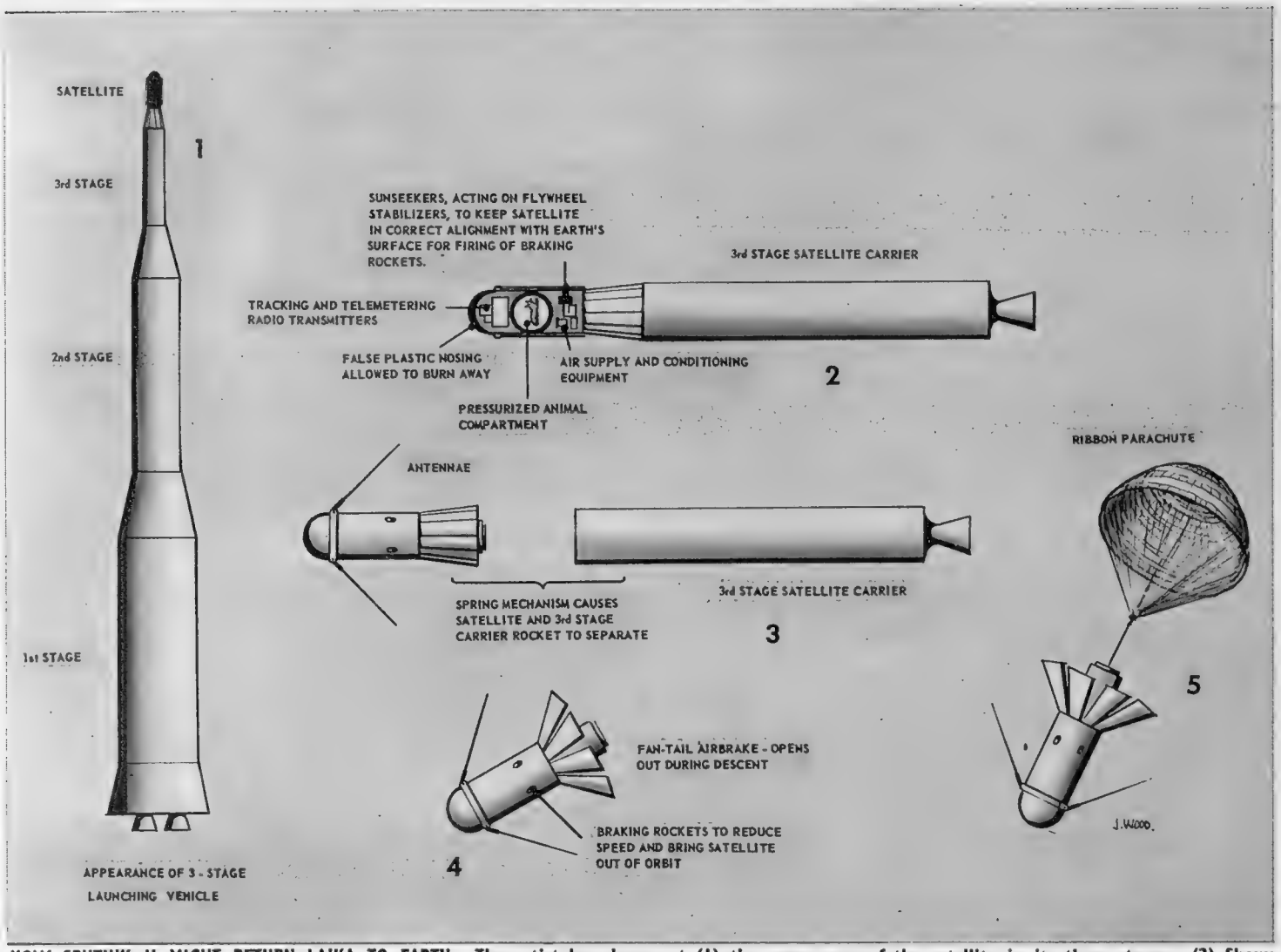


A SPACE-LINER FOR EXCURSIONS TO THE MOON?: The sketch is taken from a book, *Journey into Cosmos*, published in the Soviet Union, and shows a design for a three-stage passenger-carrying rocket cradled in a giant plane. The numbers indicate the components of the stages. (1) Liquid rocket motors. (2) Turbo fuel pumps. (3) Tanks of hydrogen-peroxide for working the pumps. (4) Fuel tanks. (5) Oxidisers. (6) Parachutes for the descent of the first- and second-stage rockets when they have completed their functions of propelling the third stage through space. (7) Fins for the first stage for steering in the atmosphere. (8) Bearing planes with rudders on the third-stage rocket for its return to earth. (9) Control cabin. (10) Passenger and baggage compartments. Most experts hold that such a design is more fantasy than fact because it would be cumbersome.



HEADING FOR SPACE: The impression from *Red Moon* is of a jet-type plane carrying a rocket satellite from the launching ground on the start of the journey to the atmosphere. The film was shown recently in London.

ONWARDS AND UPWARDS IN AN EXPLORATION OF THE UNIVERSE: *Left*—In the second stage of flight the rocket-satellite is shot off from the frame of its carrier plane. *Right*—The third and final stage. The tail of the rocket drops off and the Sputnik proper carries on by itself. Although these ideas come from a Soviet film it is not believed that such principles were embodied in Sputnik I and Sputnik II (the dog-carrier) or that the film reflects current Soviet research on satellites.

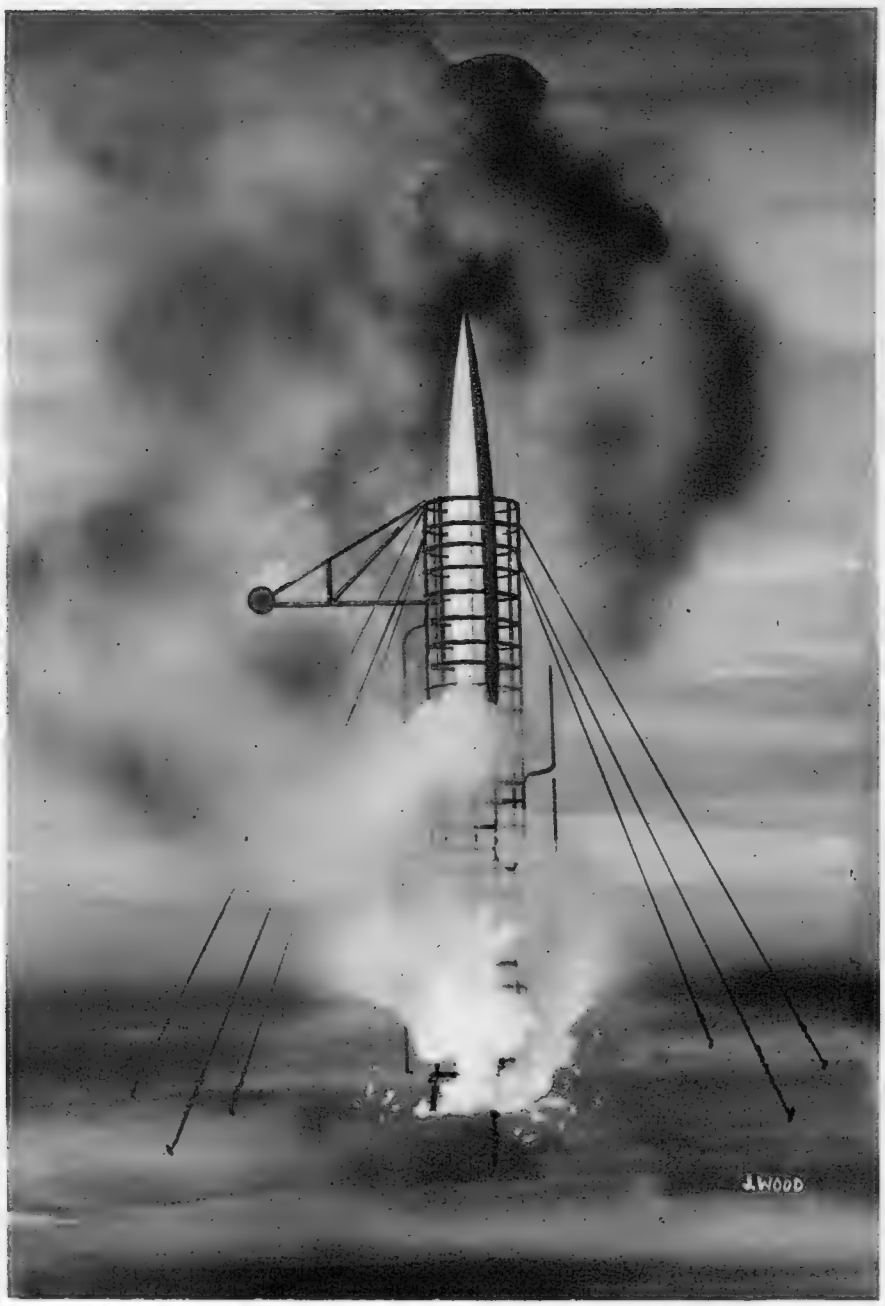


HOW SPUTNIK II MIGHT RETURN LAIKA TO EARTH: The artist has drawn at (1) the appearance of the satellite in its three stages. (2) Shows the third-stage satellite with the dog in her compartment at the head of the carrier and lists various essential parts. (3) The mechanism by which satellite and carrier separate. (4) and (5) Fan-tail airbrake, braking rockets and parachute bring Laika back to earth.

A description of the method by which a dog in a satellite might be recovered to earth has been given to THE SPHERE by Kenneth W. Gatland, F.R.A.S., whose book *Project Satellite* is being published at the end of this month.

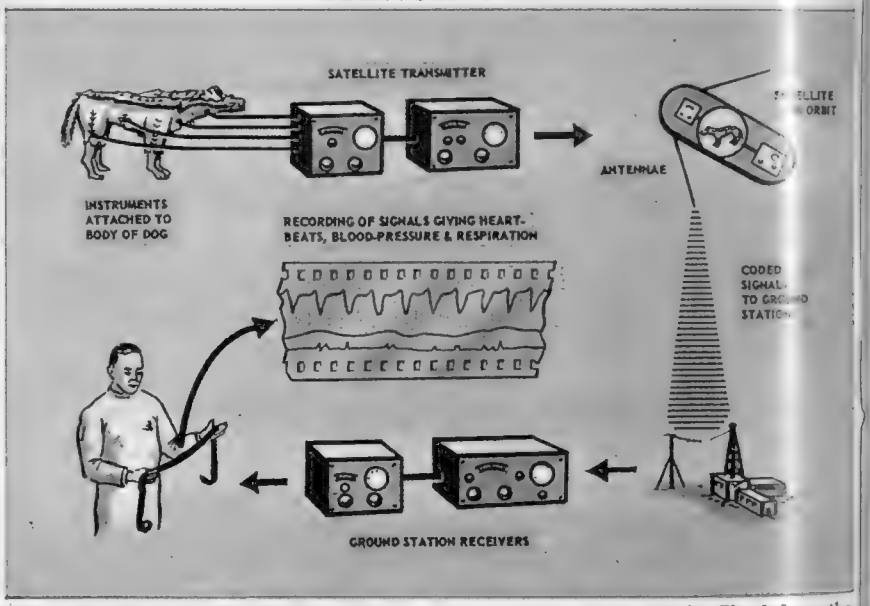
The attempt would most profitably be made when the satellite had descended to its lowest point in the orbit. The first requirement would be to separate the satellite from its carrier rocket and then reduce its orbital speed so that gravity reasserts its influence and causes the satellite to fall towards the earth. This could be achieved by braking rockets firing forwards, against the direction of motion.

Next, some form of airbrake would be needed to slow the rate of descent still further. This might take the form of a fan-tail of hinged blades which opens from the back of the satellite. As the satellite began to reach denser levels of the atmosphere, the hinged blades would gradually close to prevent too rapid deceleration. The danger-point, where maximum heating occurs, would be between 50 and 70 miles, the height at which meteorites burn up due to friction with the air. As protection a laminated plastic material on the nose of the satellite would be allowed to heat up and burn away, leaving the structural shell to penetrate the atmosphere. Finally, a ribbon-type parachute would be released to reduce the speed still further and effect a landing.

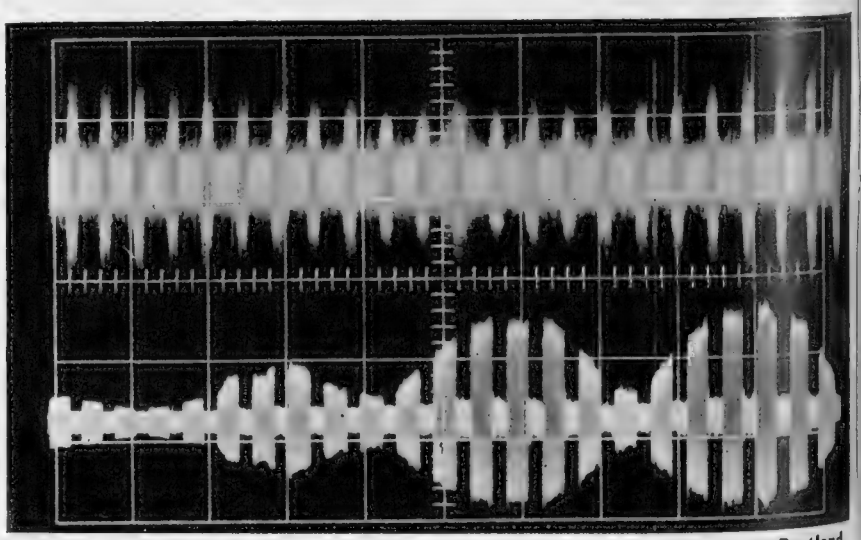


THE CRITICAL MOMENT IN THE LAUNCHING GANTRY: Smoke pours out as a rocket shoots on its journey into the heavens. The drawing is based on a picture of a type of launcher used in the Soviet Union. Such a gantry may have dispatched Laika, the space dog.

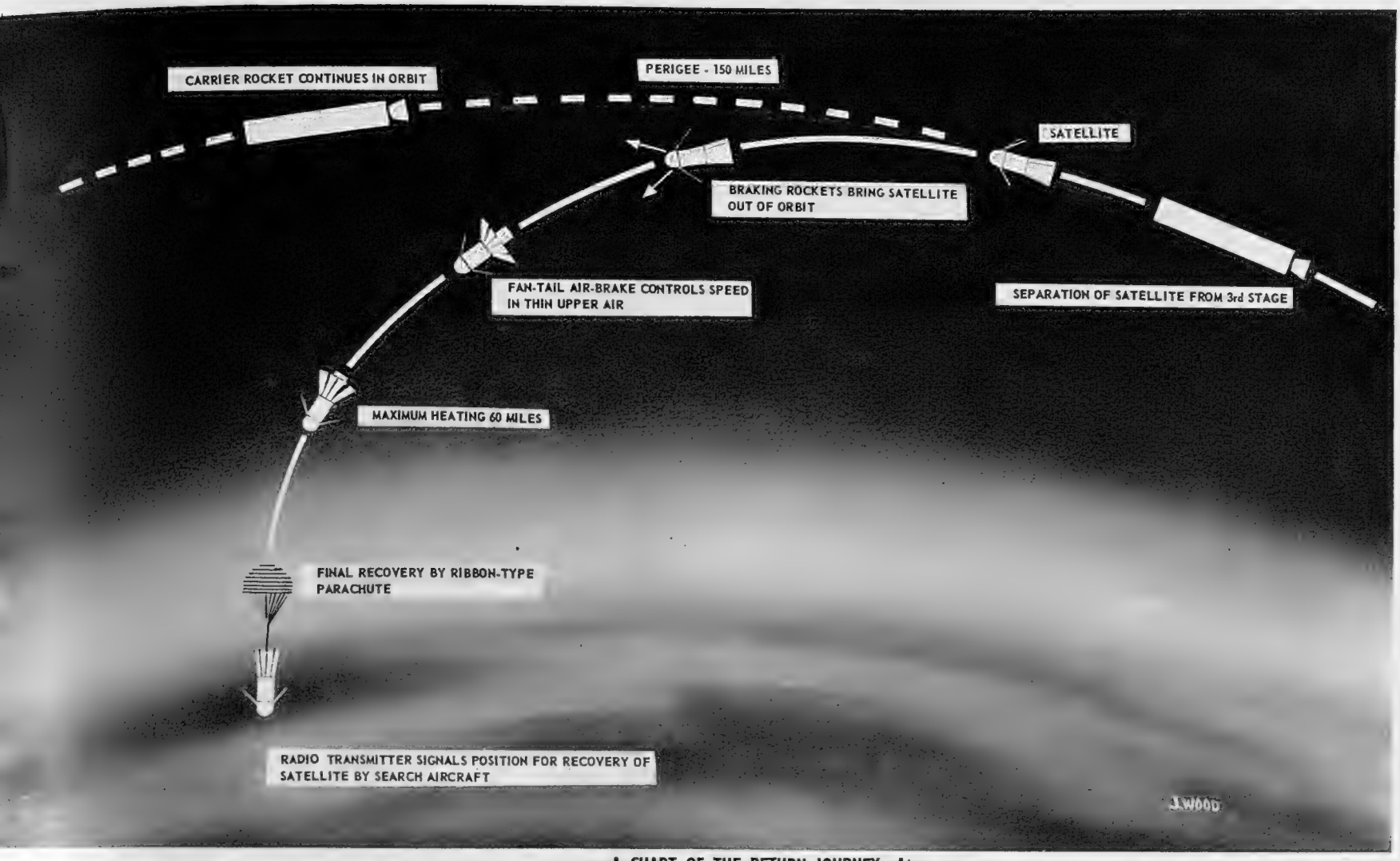
SPUTNIK SURVEY—
BRINGING BACK A SPACE DOG



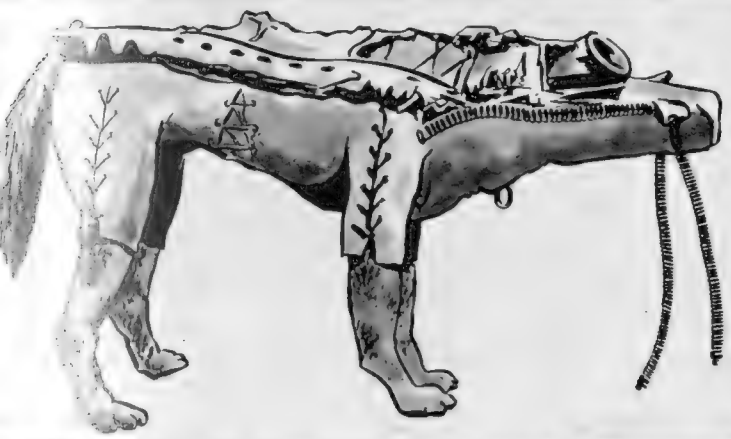
KEEPING IN TOUCH WITH THE DOG: The diagram outlines the method. The information obtained from the instruments attached to Laika is radioed earthwards by transmitters in the Sputnik. The coded signals are recorded on graphs at the ground station.



COMPARISON OF "BLIPS": Electrical impulses are pictured on an oscilloscope at Portland, Oregon, engaged in tracking the Sputniks' course. The "blips" (sounds emitted by the satellites) from Sputnik I (above) are shorter than those from Sputnik II.

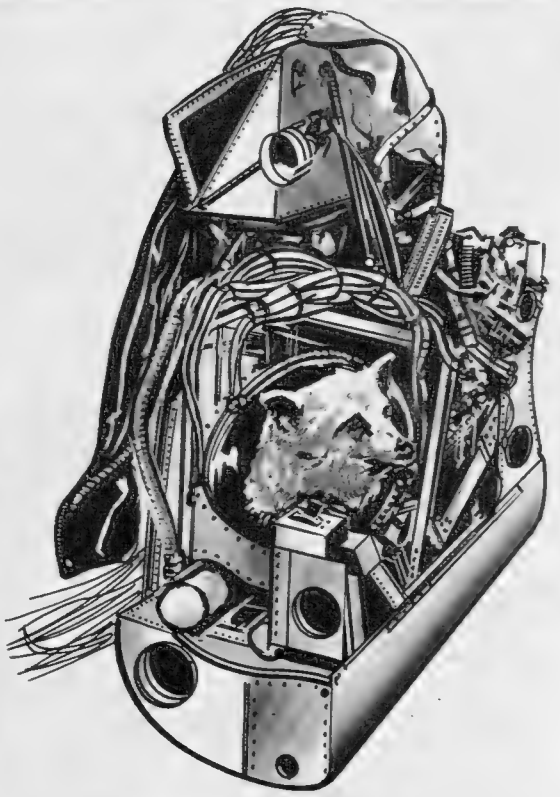


A CHART OF THE RETURN JOURNEY: At a perigee of 150 miles (the point when the Sputnik in its orbit is nearest the earth) the satellite separates from its carrier. Then follow the three stages of descent. First, the braking rockets bring the satellite out of orbit. Next the fan-tail airbrake operates. On through the area of maximum heating in the lower atmosphere and finally the parachute opens and a radio signals the position of landing.



On right—

SNUG IN A SPACE KENNEL: The drawing gives a conception of the inside of a dog-carrying rocket. The animal is surrounded by the mass of equipment with which contact is kept with the earth but is not wearing a space suit.



A CANINE SPACE SUIT: The drawing is taken from details in a picture published recently in the Soviet Press which was stated to be of a dog "modelling" spacewear. The suit is pressurised and a mask with goggles fits over the head. The attachments at the mouth are presumably wires which connect with the radio transmitter within the Sputnik. It is considered probable that Laika set off on her epic journey in a suit of this kind.

On right—

EQUIPMENT FOR A ROCKET DOG: The dog is one of those sent up in a Soviet rocket to a great height and safely brought back to earth. He is resting in what looks like a diver's outfit. A helmet was fitted over his head.

SAFE AND SOUND AFTER A TRIP TO SPACE IN A ROCKET: The two pictures from the Soviet Union show a dog landing and being picked up after being sent up in a rocket. Before Laika was despatched in Sputnik II the Russians are understood to have carried out several rocket experiments with dogs and it is said that some of them reached heights of over sixty miles above the earth. Space dogs go through a careful training and conditioning for their work and do not appear to suffer ill effects.

THE PILLARS OF THE TEMPLE OF JUPITER IN BAALBEK: They are the survivors of the fifty-eight columns, each 60 ft. high, which surrounded the temple. Beyond them is the Temple of Bacchus. Baalbek in ancient times was a seat of both Baal and Sun worship. The Greeks named it Heliopolis, which means "City of the Sun."

THE SOLE REMAINS OF A MAGNIFICENT SHRINE TO THE GODDESS the only reminders to-day of one of the many temples i century A.D. the city reached the climax of its architectu

Baalbek, because of the number of its magnificent buildings and its geographical position, must have been a city of outstanding splendour in the early centuries of the Christian era. Standing some 4,000 ft. above sea-level, it was a well-watered locality of pleasure and delight, full of palaces, fountains, temples and other grand monuments.

The origin of the community is obscure. There is no support for the legend that it was the site of the Garden of Eden but beyond doubt it was a seat of Baal and Sun worship in an ancient age. The religion of Baal often included Sun worship and presumably for this reason the Greeks called the city Heliopolis, the "City of the Sun." The Cæsars brought Baalbek into the Roman orbit, Augustus establishing a garrison there. In the second century A.D. under Antoninus Pius, many additional buildings were made and Heliopolis reached the climax of its grandeur.

One of the most impressive groups of monuments centres on the Acropolis. Three gateways in a richly-ornamented screen led into a Forecourt which was itself the only entrance to the Great Court, surrounded by eighty-four columns. This was joined by a Basilica and a flight of steps to the Temple of Jupiter-Baal or the Great Temple, probably the finest and most massive of the shrines. Also in the Acropolis was the smaller temple of Bacchus (which is much better preserved than the other remains) and nearby was the circular structure of the Temple of Venus.

When Rome became Christian the Great Temple was converted into a church, and so probably were some of the other shrines. But by then the days of Baalbek were numbered—as was the case with many of the classical cities of the Eastern Mediterranean. In the eighth century the Arabs sacked the city and the Great Temple went through another transformation, this time becoming a fortress. The outworks of the fortifications can still be traced. Later the depredations of other invaders added to the decline, the pillage by the Mongols, about 1400, being especially devastating. Finally a severe earthquake in 1759 completed the ruin of a once great city. But the visitor to-day can reconstruct without any difficulty the former glory of the "City of the Sun."

On left—

ORNATE COLUMNS OF A.D. 200: The fine carving at their head was worked 1,800 years ago in the Temple of Jupiter-Baal, known also as the Great Temple.

LOVE : The steps, the pillars and what was possibly an apse are all that remain of the Temple of Jupiter-Baal at Baalbek. Under the Roman Emperor Antoninus Pius in the second century A.D. it was splendid. Six hundred years later it was sacked by the Arabs.

ONE OF THE BEST PRESERVED OF THE TEMPLES : The proportions of the Temple of Bacchus can be judged from a comparison of the pillars with the man walking below them. This shrine has survived the various disasters which have occurred to Baalbek in far better preservation than most of the other monuments.

CITY OF THE SUN" IN LEBANON

Baalbek Contains Some of the Finest Ancient Monuments in the Middle East

A LION'S HEAD THROUGH WHICH WATER POURED: It is one of the many fountains in which the ancient city in Lebanon abounded. The final destruction of Baalbek was due to an earthquake in 1759.

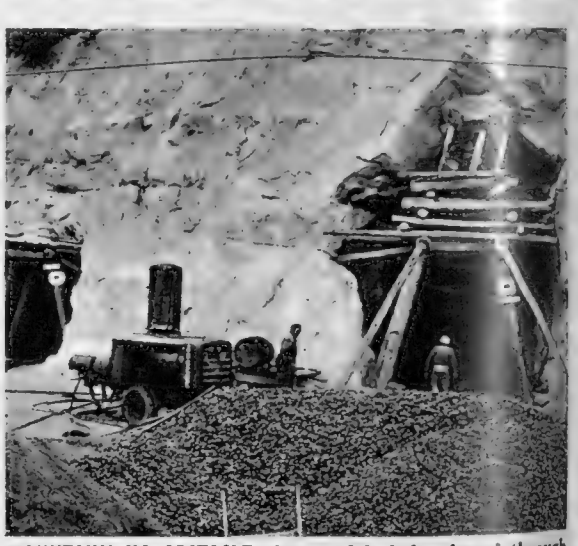
THE FORECOURT IN THE ACROPOLIS : Here is the most magnificent collection of remains. The Acropolis consists of Forecourt, Great Court and Basilica. The latter leads to two temples—the Great Temple of Jupiter-Baal and the Temple of Bacchus. Baalbek is 4,000 ft. above sea-level on the watershed of the Orontes.

CONSTRUCTION ON A STRETCH OF THE "HIGHWAY OF THE SUN" WHICH WILL LINK THE PRINCIPAL CITIES OF ITALY: Work is in progress near Teano, some thirty miles from Naples. A start has been made on various sections of the ambitious project for the new Italian *autostrada*. Named the "Highway of the Sun," it is planned to run it with twin double-track carriageways in the most direct line from Milan through Bologna, Florence and Rome to Naples. Eventually it will be extended to the south.

THE NEW ROAD TO ROME

Italy Makes a Start on the "Highway of The Sun"

IN THE TRADITION OF THE ROMAN ROAD BUILDERS: The new highway at Ponte Nure, near Piacenza, will be as straight as an old Roman road. The carriageways and their verges will have an average overall width of 25 yards.



MOUNTAINS NO OBSTACLE: A tunnel is being bored through the Apennines on the section between Bologna and Florence. Eighty-one tunnels are being built for the road.

In the days of Mussolini much publicity was given to his schemes for super-highways known as *Autostrade*. Like most of the boasts of Fascist dictators, little of the much-vaunted plans materialised in practice. Indeed, the Duce's roads were bettered by Hitler's *Autobahnen* in Germany, which is not saying a great deal.

However, since the war the Italians have decided that main roads of the highest quality are essential in their peninsula and already they have some of the best motor highways in Europe. Now they have started on a project which will undoubtedly give them one of the finest motoring thoroughfares in the world.

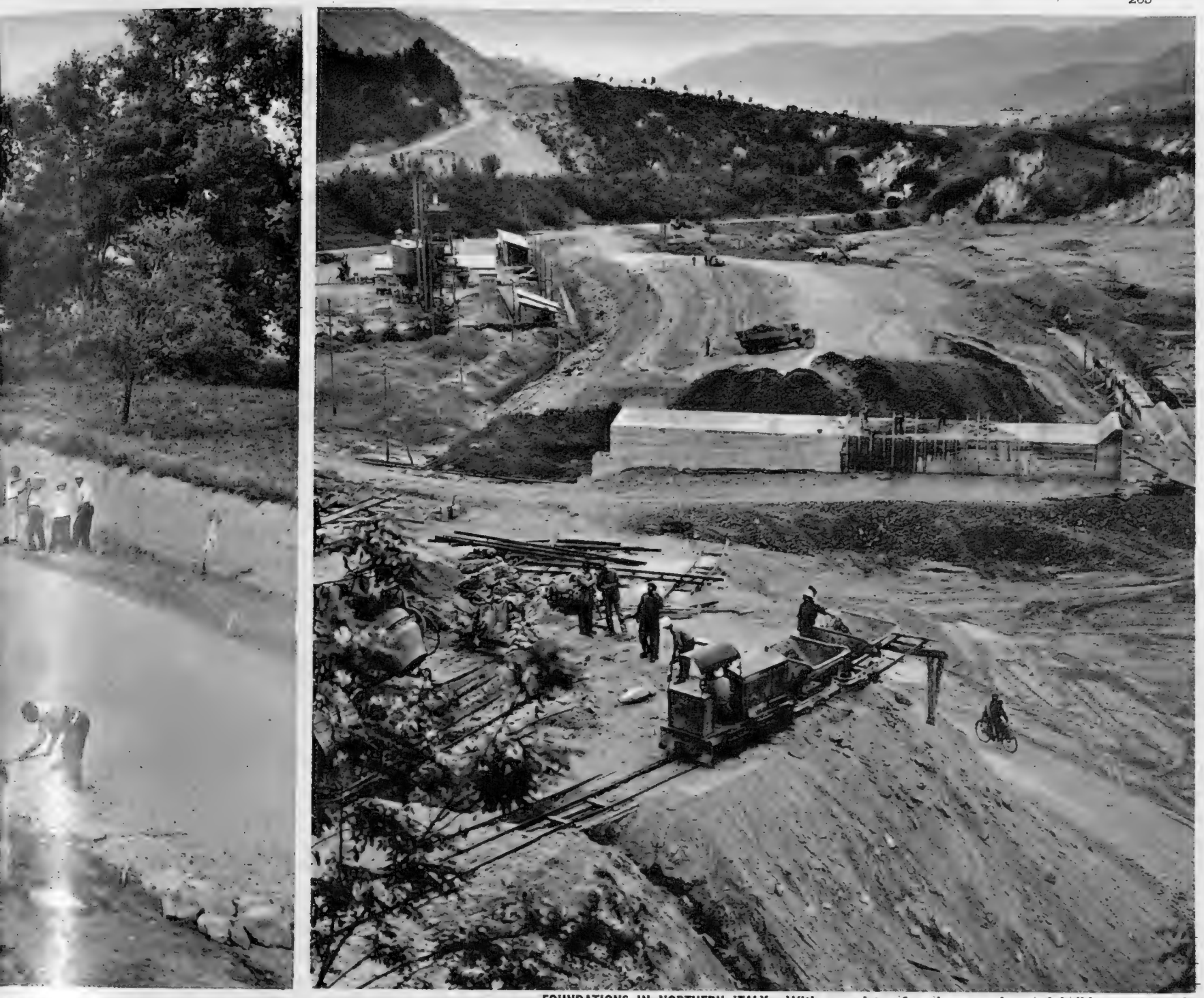
The road to Rome of the future, from north and south, will be known as the "Highway of the Sun." Its purpose is to link the large urban centres of the north with the capital and then run on to Naples and the south. In the tradition of the old Roman road-builders, it will be driven as straight as possible. The modern engineers, with the help of the varied and ingenious equipment available to them, intend their *autostrada* to be a twin double-track carriageway with an overall width of about 25 yards, including verges.

The first sections are now being constructed and will extend from Milan to Naples over a distance of nearly 500 miles. There is no intention of completing them in a hurry, for two reasons. The first is the nature of the terrain, the second the cost.

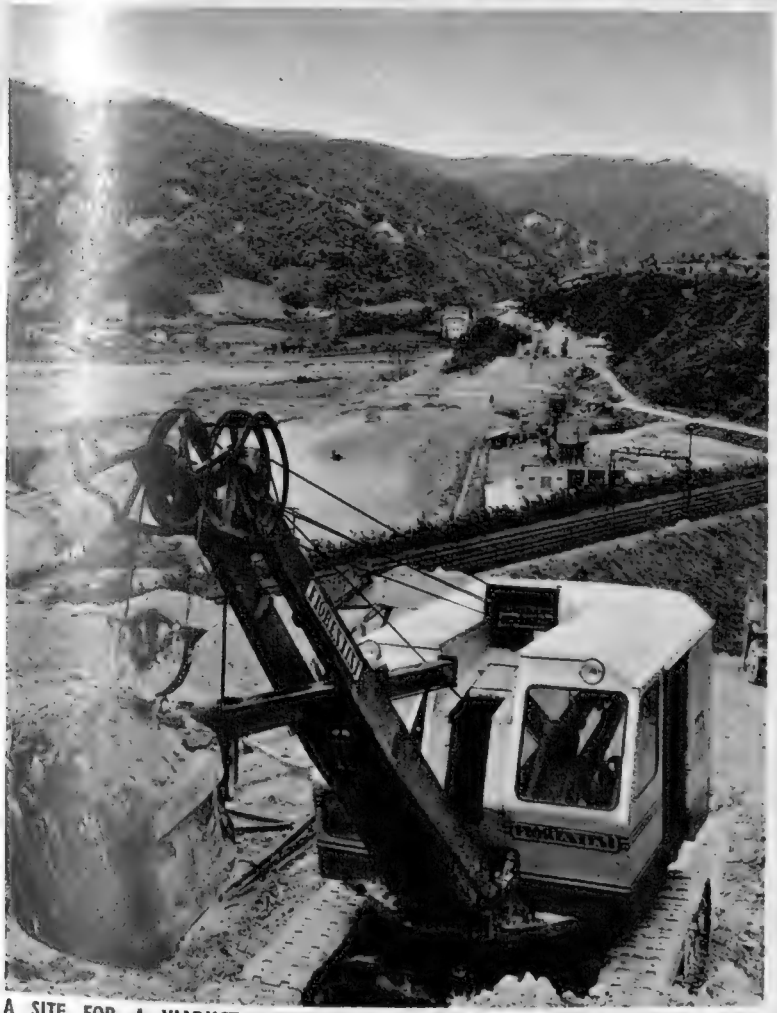
To follow the direct route from Milan via Bologna and Florence to Rome, it is necessary to overcome the obstacles of the Apennines. Between Rome and Naples is the Lepini range. The "Highway of the Sun" will require eighty-one tunnels (with a total length of nine miles) and 304 major bridges and 3,800 smaller ones. The longest of the viaducts will extend for three-quarters of a mile over the River Po. At no point over the whole 500 miles will the gradient ever be more than 1 in 27.

The cost of such a project will obviously be colossal. The Milan-Naples section will call for an expenditure of probably £110,000,000, to be spread over six years. The extension to the south will need more than as much again, both in time and money. Italy, which is not a rich country, cannot hope to raise such amounts without foreign loans and help from aid programmes. But, in the long run, it is confidently believed that the highway will prove a sound investment. The building of it will employ armies of men and huge quantities of material from Italian factories, thus relieving unemployment.

Various speeds have been worked out in theory which will be considered safe for vehicles travelling along this splendid mid-twentieth-century motor road. In some sections, such as Milan-Bologna, it is anticipated that it may be possible to drive without any legal ban at as much as 100 miles an hour. This will no doubt be a boon for those on urgent business. But it is impossible to believe that any traveller with leisure will want to rush through the landscapes of Fra Angelico, or past the architecture of Brunelleschi, or register speed records in Tuscany and Umbria. And can anyone really appreciate the approach to Rome unless he makes it on foot?



FOUNDATIONS IN NORTHERN ITALY : With a variety of equipment, the road builders prepare the foundations of the *autostrada* at Barberino, in the Province of Emilia. Natural obstacles in country which is often mountainous will be overcome by construction of tunnels and bridges.



A SITE FOR A VIADUCT : A crane lifts rubble at Campolungo di Vado in preparation for one of the 304 major bridges which will carry the " Highway of the Sun " at various points. There will be 3,800 smaller bridges.

LANDSCAPE WHICH WILL FLASH BY THE TRAVELLER OF THE FUTURE : Over a section such as this, when completed near Casalecchio, the motorists will be able to travel legally at very high speeds. Even in the hilly country in the distance, gradients will never exceed 1 in 27.

CAGE BIRD SHOWS DRAW THE CROWDS

As Pets, Cage Birds Have Overhauled the Cat in Popularity

By BRIAN VESEY-FITZGERALD

WE pride ourselves on being a nation of animal-lovers. Along with "a sense of humour" and "the team spirit" to be "fond of animals" is considered (by ourselves) to be one of the national characteristics of the English. Indeed, we are inclined to regard the treatment of animals by other nationalities as little short of barbaric, our own as but little short of perfection.

But this trait in our national character is comparatively new: it has been developed only within the last hundred years or so, and has become pronounced only within the last fifty. The first Act for the protection of animals in this country (it dealt only with cattle) was passed in 1822—incidentally, the first Act for the prevention of cruelty to children was not passed until 1899—and the first comprehensive Act for the prevention of cruelty to animals (the Protection of Animals Act) was not passed until 1911.

Whether—despite the legislation we have passed, and the Protection of Animals Act, 1911 was reinforced in 1933 by the Protection of Animals (Cruelty to Dogs) Act and again in 1954 by the Protection of Animals (Amendment) Act—we have, in fact, any real right to regard ourselves as a nation of animal-lovers is open to question. Last year the Royal Society for the Prevention of Cruelty to Animals dealt with over 26,000 complaints of cruelty (most of them concerning dogs, despite the magnificent missionary work of such organisations as the Tailwaggers Club), and one may be absolutely sure that there were many more cases which did not come to light.

Quite apart from the work of the R.S.P.C.A., the multiplicity of animal protection societies of one sort and another suggests that love of animals is by no means as widespread as we like to think, that love of animals is far from being a national characteristic of the British. And the attitude of the London County Council (which is, I suppose, by far the largest landowner in Britain) and a steadily increasing number of other councils towards the keeping of animals on their housing estates suggests not only that a love of animals is not highly developed among modern urban councillors, but also that they have no great belief in the depth of their countrymen's fondness for animals or, at any rate, no great faith in their ability to care for them properly.

Perhaps—but this must not be taken to mean that I am in agreement with the L.C.C.'s regulations governing animals on their housing estates: I am, as a matter of fact, in wholehearted disagreement, for it appears to me to single out a particular section of the population for special treatment, to interfere with the freedom of one section—it would be truer to say that we are a nation of animal-owners rather than one of animal-lovers. No one, at least, could deny that we are pre-eminently pet-minded as a nation.

And I suspect that if you were to ask 100 people, taken at random, which is the most popular pet, the most widely-owned pet, in the country, ninety-nine (if not the whole hundred) would answer without any hesitation at all "the dog." Actually, although we have an international reputation as a nation of dog-breeders and dog-owners, this has never been the case: there have always been many more cat-owners than dog-owners (roughly three times as many) in Britain. Dog-owning in Britain reached a peak shortly after the end of the war: there were then some 4,000,000 dog-owners. This did not, unfortunately, mean that there were some 4,000,000 dog-lovers. All it meant was that dog-owning was fashionable; the possession of a dog conferred a certain social status, like the possession of a fur coat or, nowadays, a television set or a washing-machine. In recent years there has been a steady decline in the numbers of dog-owners (largely due, I fancy, to the regulations of such bodies as the L.C.C.) and to-day there are only about 2,500,000. The cat population, on the other hand, is estimated at about 7,000,000, which is probably an under-estimate.

It may well be asked why, if this be the case, most of the complaints of cruelty should concern dogs. We are not a cruel people—indeed, cases of deliberate cruelty to animals are, happily, comparatively rare—but we are, on the whole, astonishingly ignorant about animals (sentiment more often than not taking the place of knowledge) and we are more and more pressed for time. The vast majority of complaints are concerned with neglect rather than deliberate and savage cruelty. The dog is an animal which requires a great deal of attention and love: it is entirely dependent on man, quite helpless without him. A dog really does require time (and repays it a hundred-fold) and so few people have time to spare in this era of the five-day week.

The cat also requires attention and love, but is not so demanding of time. It has never become entirely dependent on man, and it is still well able to look after itself if need be. But there is more to it than that. People keep cats either as destroyers of vermin or because they love them, and for no other reasons. There is no social kudos attached to the cat. People keep dogs for any number of reasons, ranging from social prestige to pleasing the children or barking at burglars, and sometimes without any very strong feelings about them. Be that as it may, there is, I think, far less detailed knowledge of dogs among dog-owners than there is of cats among cat-owners. Going (as I do) to many dog shows and quite a few cat shows, I have no doubt that, though the crowd at the latter is never so large, it is, generally speaking, much more knowledgeable. I wonder if the fact that you have to study a cat much more closely than a dog before you can come to terms has anything to do with it?

However, to find a really knowledgeable crowd you must go to a cage bird show. As pets cage-birds have overhauled the cat in popularity. According to the researches of Mr. Victor Wyeth there were 6,000,000 cage-birds in Britain last year—an under-estimate, I should have thought—and the number has undoubtedly increased considerably since then. I do not know how many cage-bird clubs there are in Britain (the number is certainly in excess of 1,000), but I do know that their shows are quite astonishingly well attended. For example, there were over 1,000 budgerigars at this year's Nottingham show, over 1,000 canaries at the Birmingham show, over 1,000 birds at the Cardiff show, over 2,500 at the Brighton show, and even a small place like Auchterarder, in Perthshire (population 2,000 odd), had more than 600 birds on show.

More impressive even than the number of birds, however, is the crowd itself. They come from every conceivable walk of life, but they share a common, and exceptionally expert, interest in birds. You hear none of the "gush" so common at dog shows, and they have an infinitely greater technical knowledge than you will find among the crowd attending a cat show.

One might perhaps expect this where canaries are concerned, for canaries have been kept (and periodically exhibited) in this country for more than 300 years. But the budgerigar was first imported into Britain as recently as 1840 and has become really popular only in the last ten years or so, yet at the shows budgerigar fans, including elderly spinsters who keep just one bird because it talks (though frequently it is only the ear of love that can detect speech), reveal a technical appreciation of the finer points which would not disgrace a canary fancier of long standing.

Of course, the fact that the bird is in a cage probably in the living-room, helps to focus attention upon it. Perhaps because of this, people seem to get more "wrapped up" (without getting over-sentimental: you cannot cuddle a bird as you can a dog or a cat) in birds than in most other pets. I imagine that cruelty to cage-birds, neglect of cage-birds, is very rare indeed.

With the great increase in the numbers of cage-birds has come a corresponding increase in the numbers of "escapes." On two occasions during the summer I had canaries at my bird-table, and both seemed quite undisturbed by their freedom. It is now no uncommon sight to see a budgerigar at liberty—the local paper frequently carries advertisements for lost birds—and I have seen several in the garden during the past two years. The widespread belief that escaped budgerigars will be killed by wild birds or will die of fright is without foundation. Whether an escapee would survive the winter months in this country is another matter, but I think that full acclimatisation may, perhaps, not be far off.

More and more people, following the example of the late Duke of Bedford, are keeping free-flying budgerigars; and this year, for the first time, a pair of liberty budgerigars bred in the wild and reared their young successfully in a hole in an oak tree in Hertfordshire. If their example catches on, the English countryside will undoubtedly be much more colourful in the years to come.

A JANUARY ATTRACTION IN LONDON: A general view at Olympia during the three-day National Exhibition of Cage Birds and Aquaria. *On right*—Mr. D. N. T. Vane is seen judging love-birds at the 1956 exhibition. Although similar in appearance to budgerigars, love-birds are African in origin and come under a separate class. Next year's exhibition of Cage Birds and Aquaria at Olympia has been arranged for January 9, 10 and 11.

"BLUEBIRD II" DURING THE RECORD-BREAKING RUN: Leaving a trail of foam in her wake, Mr. Donald Campbell's jet hydroplane *Bluebird II* streaks across Coniston Water, Westmorland, to break the world water speed record by returning an average speed of 239.07 m.p.h. On the first run over the measured mile Mr. Campbell reached a speed of 260.107 m.p.h., covering the distance in 8.6 seconds. On the return run, which was made without refuelling, the hydroplane covered the course in 10.26 seconds at a speed of 218.024 m.p.h. The new record is more than 13 m.p.h. faster than the 225.63 m.p.h. set up, also on Coniston Water, in September 1956. The *Bluebird*, powered by a Metropolitan-Vickers jet engine which develops 2,000 h.p., made her first run shortly after 10 a.m. One hour is allowed to complete the runs, but Mr. Campbell had returned to the boathouse jetty only eight minutes after leaving. He said at a conference afterwards that he was sorry not to have averaged 250 m.p.h., but added that he had hopes for the future.

A NEW RECORD FOR "BLUEBIRD"

Donald Campbell Raises his own World Water Speed Record to 239 m.p.h.

BEFORE AND AFTER SETTING UP THE NEW RECORD: *Above—Bluebird II* roars away from the boathouse jetty amid a flurry of foam. Eight minutes after setting out, the boat was back at her moorings, having achieved a new water speed record. It is subject to official confirmation by the Union of International Motor Boating in Brussels. *On right*—Mr. Campbell smiles triumphantly as he stands in the cockpit loosening his suit made of Grenfell cloth.

TRAVELLING AT SPEED ON CONISTON WATER: Only the fins on the undersurface of *Bluebird II* are in contact with the water as she flashes over the measured mile during her record-breaking run. Mr. Campbell had been looking for the right conditions to make an attempt on his own record since June. Because the capabilities of the craft are now extended to the maximum, Mr. Campbell and his team of designers and engineers are to consider a new design for a faster craft.

AN ANCIENT WATER MILL IN GLOUCESTERSHIRE: This view from the banks of the Avon shows part of the water mill wheel at Tewkesbury protruding from its stone housing. It is a fine example of a water mill and is well preserved. In the background are the central tower and western pinnacles of Tewkesbury Abbey, which has ancient stained glass of remarkable colour in the clerestory windows.

A FEATURE OF THE BRISTOL FOLK MUSEUM: transferred from its original site in Folk Museum in Blaise Woods. The

MANY types of water mills throughout Britain are now receiving the attention of the Council for the Preservation of Ancient Buildings, who have long cared for our old windmills. Mr. C. J. Cornish, an authority on water mills, has written these words on the subject: "Next to the parish churches, the parish mills have the largest history. They are by far the oldest among the 'antiquities of agriculture.' Even in our old country, and where the buildings have been renewed again and again in the course of centuries, the site of the mill and of the mill-cut is often the same as that occupied by each in the days of the Saxons."

Water mills, which are older than windmills, also have the longer life. Whereas few windmills still grind corn in England to-day, there are quite a number of working water mills. But there are not, of course, as many as at the time of the Domesday Survey, when 7,500 were counted during 1080 and 1086.

The National Trust has acquired more than one water mill. Flatford Mill, painted by many an artist, springs immediately to mind. Another example is the City Mill at Soke Bridge, Winchester, which was rebuilt in 1744 and restored in 1929.

Besides grinding corn, early water mills had many other uses: these included malt crushing, cloth-fulling (pounding the cloth with wooden beaters to thicken the fabric), hemp spinning, leather dressing and snuff-grinding.

Laverstoke Mill, in Hants, is famed for its paper mills, especially as the product is used for Bank of England notes. The contract has been in the same family since 1724. Another less familiar use for a water mill is brass-making, and the old mill beside the River Avon, at Keynsham, Somerset, makes a most pleasing picture. Another old water mill which should be safe from demolition stands at Dunster, on the Castle Estate, near Exmoor country. The mill's pair of old wheels are still fixed in position beside a stream. The Torquay Corporation has carried out a considerable amount of useful work on the famous Cockington Estate by preserving an ancient water wheel, and to this day the flow of water still runs. At Bristol the municipal authorities, assisted by a monetary gift from a member of the Wills family, have transferred an eighteenth-century grist mill from the Chew Valley (to be flooded for a huge reservoir) to Henbury, where it has become part of the Folk Museum in Blaise Woods.

The majority of visitors to Tewkesbury know of the famous old mill beside the Avon, one of the landmarks near the ancient abbey. The same waters flow by Guy's Cliffe Mill at Warwick, which is being cared for by a local society, named after the famous Guy of Warwick, who lived in the Cliff opposite as a pious old hermit. A mill has been in existence at Guy's Cliffe since Saxon days.

Southwards, in the Cotswolds, lies the beautiful village of Fairford, whose church is noted for its stained glass. A handsome water mill is situated beside the River Coln, and from the bridge spanning the waters next to the mill an exceptionally good view of the church can be gained. The church was rebuilt by John Tame, a famous fifteenth-century wool merchant. Somerset has a dignified Georgian water mill. It is at Bathampton, beside the Kennet and Avon Canal.

A WATER MILL IN THE COTSWOLD HILLS: The handsome water mill and mill house at the small and ancient market town of Fairford is situated on the banks of the River Coln. It is only a few hundred yards away from the fifteenth-century Church of St. Mary, which can be seen on the right. Fairford is famed throughout England for its wealth of old stained glass.

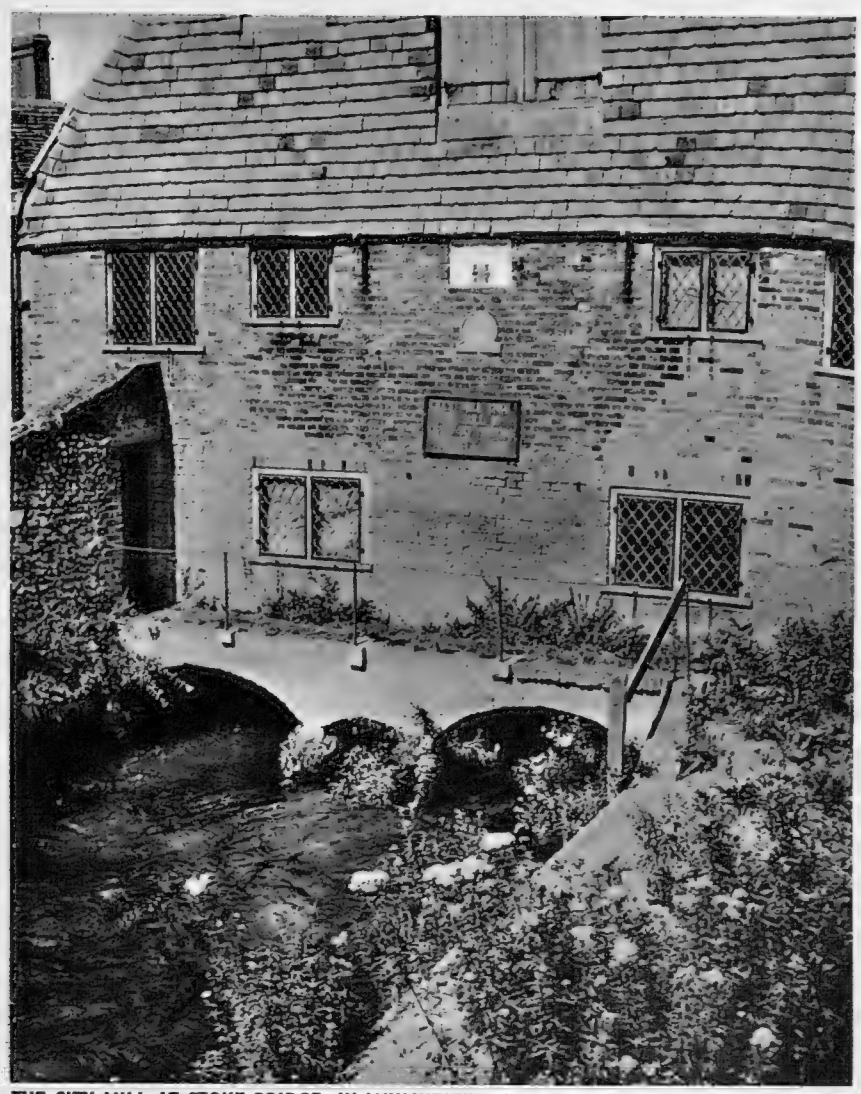
The Hampshire Avon provides two interesting examples of water mills. The one at Salisbury is situated in the heart of the city and can be viewed from a bridge in Fisherton Street. Christchurch's Priory Mill, which is of monastic origin, has been traced to a Saxon foundation, and in the eighteenth century smugglers used the building to hide contraband. In Devon, at the tiny village of Bovey Tracey, a fine old water mill faces the old bridge over the River Bovey, its wheel sadly askew. Not far away, at Dartington, visitors can see one mill in full working order. Another Southern county, Wiltshire, provides a good example of a water mill at Wylye. Surrounded by thatched cottages and an ancient church, it is one of the most picturesque corners of England still surviving.

In Nottinghamshire, the Castle Mill at Linby was rebuilt in the eighteenth century. It stands on the site of one mentioned in Domesday. Corn was ground for the monks of Newstead Abbey. It was there, in 1785, that James Watt set up his first engine for a cotton mill. Bourne Mill, the National Trust property at Colchester, Essex, was built in 1591 and has elaborate stepped and carved gables in Dutch style. A handsome Georgian water mill can be found at Elstead, in Surrey, riding over the little River Wye. The National Trust has another mill property in Surrey at Shalford, where the eighteenth-century mill stands on Tillingbourne stream. East Anglia has a beautiful example at Burnham Overy, Norfolk. An attractive group of red-brick buildings dating from 1795 consists of a three-storied mill and maltings, a mill house and adjoining cottages. Launceston, in Cornwall, has an old water mill beside the River Kensey.

Perhaps the most interesting water mill in Britain is the Tide Mill at Woodbridge, Suffolk. It is the last working tide mill in this country. Dating from about 1700, it stands on the site of the older ones dating back to the twelfth century. The addition of corrugated iron walls, however, has spoilt its beauty, but it is hoped that the once-handsome building will be restored.

The New York Community Trust is contributing to the preservation of the Tide Mill. This Trust is made up of a group of Americans who are helping us to preserve similar notable derelict and war-damaged properties.

The new stone building houses an eighteenth-century corn-grinding mill which has been he Chew Valley, in Somerset, to Henbury, where it has become a prominent feature of the nill is driven by a large undercut water wheel and is complete with tailrace and mill pond.

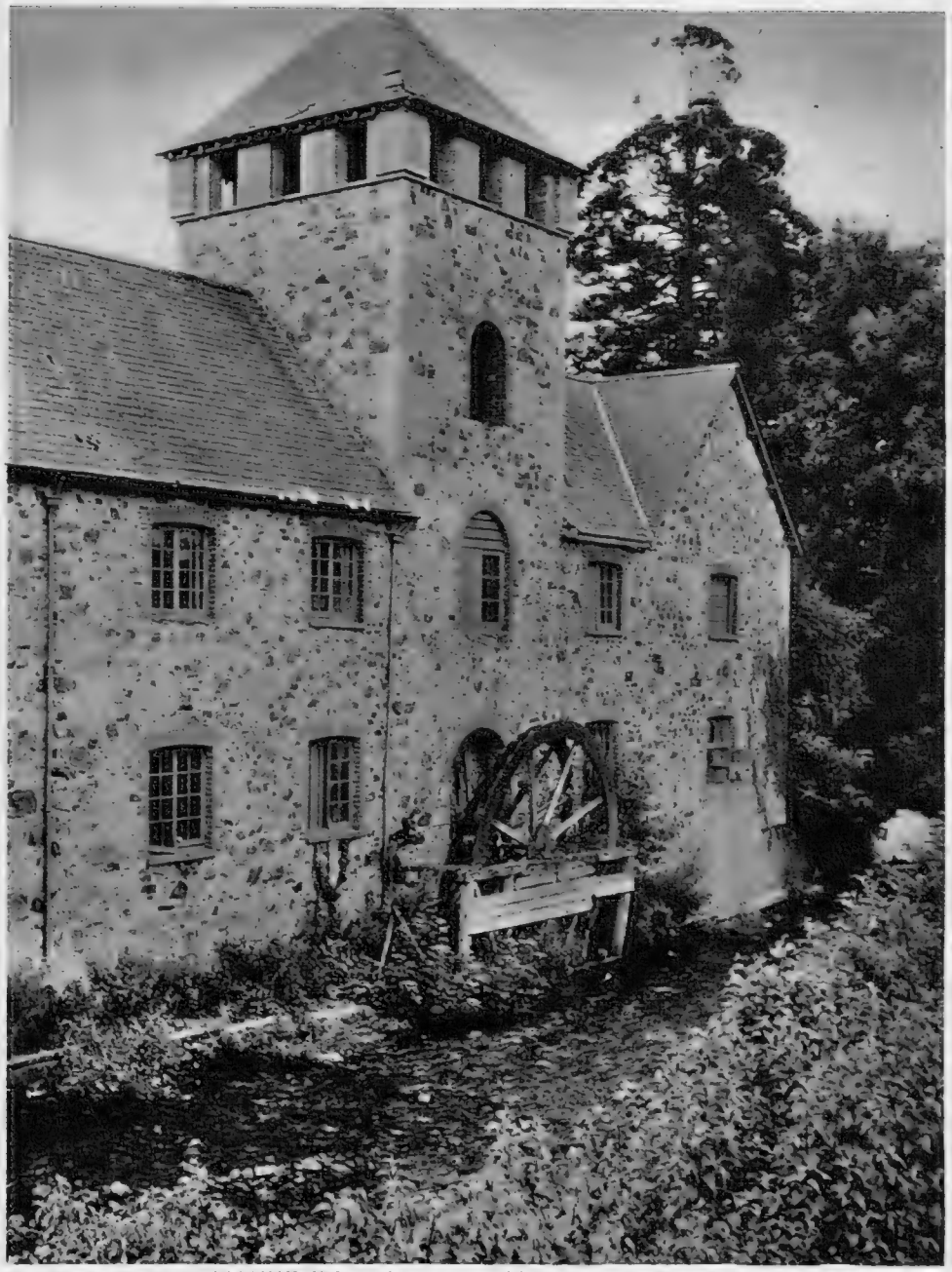


THE CITY MILL AT STOKE BRIDGE, IN WINCHESTER: Rebuilt in 1744, the mill was bought by local subscription in 1929 and restored. It is now one of the mill properties which have been taken over by the National Trust and is a great attraction to visitors.

PRESERVING OLD WATER MILLS

Britain's Water Mills, Described as the "Antiquities of Agriculture," are Being Saved from Falling into Decay

THE LAST WORKING TIDE MILL IN THE COUNTRY: It is built on the tidal River Deben at Woodbridge, in Suffolk. At each tide the mill wheel works continually for four hours. The waters are trapped in a large reservoir.



HIDDEN IN THE HEART OF DEVON: This ancient water mill, built on the River Bovey, at the picturesque village of Bovey Tracey, in Devon, is seen to advantage from Bovey Bridge. Many of these old mills are still in working order and are being preserved by the National Trust.

THE NEW ST. BRIDE'S IS NEARLY READY

The Queen is to Attend the Rehallowing of this Fleet Street Church in December

The rebuilding of St. Bride's Church in Fleet Street, which was very badly damaged by bombs on the night of December 29, 1940, is now almost complete. The work is being carried out to the design of Mr. W. Godfrey Allen, who was formerly Surveyor to the Fabric of St. Paul's Cathedral. In addition, Sir Christopher Wren's original plans of 1680 are available and are being followed in detail, subject to minor adaptations dictated by modern conditions. The rehallowing of the restored church by the Bishop of London has been arranged for Thursday, December 19, and the Queen is to be present at the service. Under the reorganisation scheme for the City churches, St. Bride's retains its status as a parish church. With the two guild churches of St. Dunstan-in-the-West and St. Andrew, Holborn, it is the spiritual centre for the area between the Victoria Embankment and Holborn and from the Temple to Ludgate Circus. Standing, as it does, in the heart of Fleet Street, it is appropriate that the north aisle of the church should be made into a Press Memorial Chapel. During the rebuilding at St. Bride's excavations have been made and the remains of at least five earlier churches and their extensions, dating to Saxon times, have been found.

EIGHTEENTH-CENTURY FIGURES FOR THE RESTORED CHURCH OF ST. BRIDE IN FLEET STREET: They are of a boy and a girl of St. Bride's School, and have been placed in the church which is to be rehallowed in the presence of the Queen on December 19.

INSIDE THE NEWLY-RESTORED CHURCH OF ST. BRIDE: A close-up of the elaborate carved screen and the vaulted ceiling in the church which is being rebuilt to the design of Mr. W. Godfrey Allen, formerly Surveyor to the Fabric of St. Paul's. The old building was destroyed during an air raid in 19[illegible].

"THE GLORY OF THE LATTER HOUSE SHALL BE GREATER THAN THAT OF THE FORMER": *On the left* the camera looks down towards the Sanctuary at the East End where work is in progress on the reredos over the altar. The reredos is to be a memorial to the Pilgrim Fathers. Above the window on the east wall is a painted mural. *Right*—The organ loft and gallery and the coat-of-arms dominate the west wall. The seating in the church will be in the collegiate style, running from east to west.

PROGRESS IN INDUSTRY AND ENGINEERING—*A Weekly Survey of Achievement in Britain and Overseas*

BUILDING A POST-WAR BUSINESS—THE STORY OF DEXION

By "THE SPHERE" INDUSTRIAL CORRESPONDENT

AT a certain point in any discussion of post-war industrial progress in Britain, when the talk has ranged over ready and spectacular examples that come, for the most part, from big established companies, a further line of questioning is inevitable. "What about the small new firms coming up? Can a young man with an idea build it into a successful business nowadays? Are there any typical success stories in British industry since the war?" To two of these questions, at any rate, one affirmative answer-cum-example comes easily to mind: "Dexion." But whether Dexion is in any way typical is another matter.

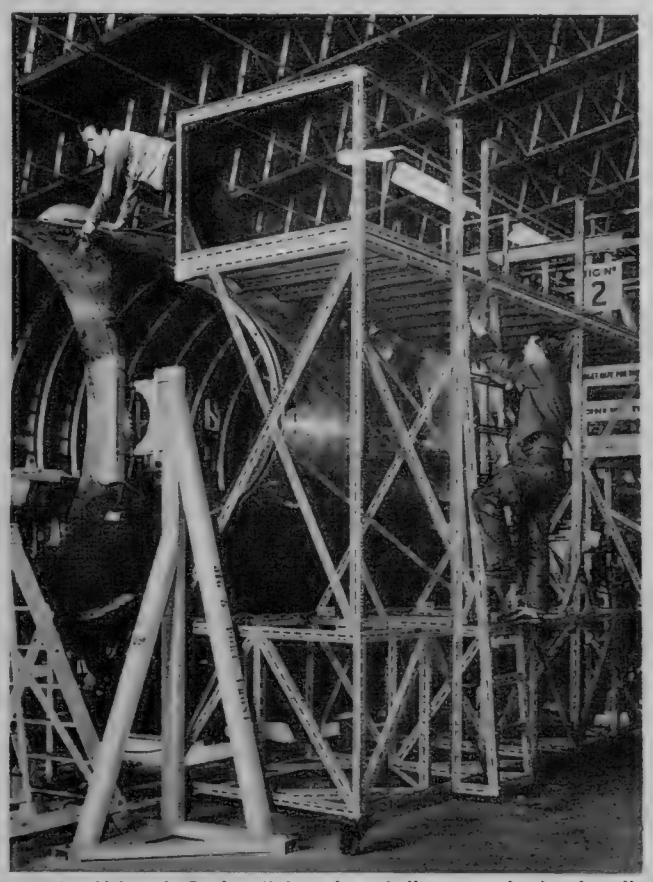
Dexion is still a smallish new firm. It has been in business only ten years, its employees are still numbered in hundreds rather than thousands, its total sales, throughout the world, are to-day of the order of £5,000,000. But its rate of growth, rather than its size, is what signifies here: and this is continuing too fast for one to fit this firm neatly into any pigeon-hole in the pattern of business size. In 1947, it sold its first few hundred feet of "Dexion Slotted Angle"; by 1951, about 10,000,000 ft.; in 1955, it produced about 27,000,000 ft. in Britain and 15,000,000 ft. abroad, and this year its world output will probably exceed 60,000,000 ft. And it has certainly been built by a young man with an idea: Demetrius Comino is only fifty-five to-day, and it is the powerful simplicity of an idea, rather than any outstanding technical originality, that counts in his product Dexion.

That product, "slotted angle," is usually described as man-sized Meccano; but essentially it is a good deal simpler than Meccano, being based on one standard 10-ft. length of a light steel angle section drilled and slotted for bolting together into almost any kind of structure anyone can think of. Simplicity, giving any novice the chance to improvise, is the keynote: one can cut off any length (without measuring, since it is marked for sawing at 3-in. intervals all the way along) and the holes and slots are ready to be bolted into a rigid three-way joint, overlapped and "spliced" to give extra length, or braced at an angle. The metal is ready-finished against rust for a permanent structure; on the other hand, once a temporary jig or fixture made out of it has served one purpose it can be taken to pieces and the material used again to build up something else.

Dexion was evolved primarily as a structural material for storage, the building of racks and shelving; but inside British industry to-day it is being used for hundreds of different purposes, according to the customer's need. The company itself has concentrated upon extending those applications, in co-operation with customers, without significantly changing this standard product, though one can have Dexion in light alloy as well as steel, plus special hinges, castors for trolleys, and panels for shelving. But perhaps the most interesting range of applications for Dexion is outside the workshop, and indeed outside the developed industrial countries altogether.

Dexion is a lightweight building material that can readily be transported anywhere: if necessary, flown in and parachuted down to places inaccessible by any surface transport. Repeated experiments have shown that a group of ordinarily intelligent people, given a supply of Dexion, bolts and nuts, plus diagrammatic instructions, can make simple structures from it without tuition. The possibilities for use in the under-developed countries—particularly in primitive regions where ordinary building materials, even timber, may be entirely lacking—are immense. Already the slotted angle is being used widely throughout these non-industrialised countries—about half a million feet of Dexion, sent out for entirely unskilled labour to build grandstands for Ghana's independence celebrations, has since been converted for use in equipment stores and house frames in the new republic. Its use for improvised "rescue operations" had already been proved after an earthquake devastated the Ionian Islands in 1953. Few new products developed in recent years have ever been used so widely, for so many diverse purposes, so quickly.

What separates Dexion from other products that have emerged since the war is that this ubiquity was planned from the start. Demetrius Comino is an Australian of Greek extraction who came to London to take an engineering degree, had three years with British Thomson-Houston, and then set up his own printing business in London. In that printing business, Krisson (the word, in Greek, means "Better," just as Dexion means "Right"), he began the streamlining of traditional technology that is characteristic of his whole Dexion group; training young apprentices, for example, rather than taking on experienced men who would be set in their ways. In a sense, the idea of Dexion originated with the need for flexible storage structures in an expanding printing business; but Comino had been growing impatient for wider scope for some time before this.



THE USE OF DEXION IN INDUSTRY: Although Dexion "slotted angle" was evolved primarily as a structural material for storage it is now used for hundreds of different purposes, according to the customer's need. The impressive pallet racking *on the left* carries 1½ tons of paper on each upper bay. *Right*—An access platform which was used by Vickers-Armstrongs Limited, during the construction of the Vickers Viscount airliner.

MR. DEMETRIUS COMINO: He made his first samples of Dexion at a small factory in Chingford in 1947.

"Printing is too much of a service and what we wanted was production," he has said. "I set myself the problem of finding a product or, better still, inventing one, that suited my personality and our resources." His conditions for the product were exacting. It had to be something relatively simple, and suited to large volume production; it had to have a large potential consumption and to be something constructive. "All this boiled down in my mind to a universal constructional unit"; one which could build large things as well as small, with the minimum possible number of joints, involving little waste, easy to pack and transport, but strong and rugged enough to stand up to normal industrial conditions.

It was in 1939 that Comino decided he had the answer. War made its realisation impossible; in Krisson, he closed down printing and turned over to engineering for war work. Not until 1947, in a small factory in Chingford, did he begin to make his first samples of Dexion: the enterprise representing £7,000 of Comino's savings, plus another £7,000 borrowed from the bank. To Comino, this was not a matter of finding out how big a market there would be for a treasured invention. It was the production of something that had been conceived entirely according to the requirements of a huge potential market that he was quite confident would materialise. From the outset, before anyone had ever bought any Dexion, he planned and put down a continuous production line, partly with American machinery, capable of producing 2,000 ft. per hour, about a half a million feet a year.

From that outset his confidence that the market would unfold itself was justified. In two years he had repaid the loan of £7,000, and the company has financed itself entirely ever since. "We eventually squeezed something like £500,000 worth of production a year from that 4,000 square feet of factory. The Board of Trade would not believe it, and insisted we had made an error in the decimal point." But the early years were not without tribulations; in 1948, with production hardly under way, steel was rationed and Dexion could obtain a small allocation only upon condition that all the products made from it should be exported. That certainly pushed the firm into world markets (to-day about 65 per cent. of its products are sold overseas); but it could have strangled the home market. Dexion enlisted the support of I.C.I., who produced a light alloy strip to keep the product before home customers. It began to sell in the United States—eventually arranging for manufacture there under licence; in 1952 it opened its own first overseas factory, in Belgium. In 1953, steel came off the ration, and home sales were free to soar.

The progress since has been somewhat triumphal, and there seems as yet no sign that the market for Dexion is approaching saturation anywhere. It has attracted imitators; there are about thirty different ones on sale, in various countries. So far this competition has been largely ineffective, though this is a comparatively lightly-processed steel product, no major steel producer has been attracted into the market. In the group, a number of other products are now being produced; but the emphasis in Dexion is still upon developing the market rather than altering the standardised product. Demetrius Comino is an original thinker rather than an ingenious mechanic: his interest is in solving problems, not devising gadgets and finding something to do with them. For the present, the development of Dexion provides his restless intelligence with a sufficiency of such problems: but perhaps only for the present.

LINKING THE UPPER AND LOWER PENINSULAS OF MICHIGAN, IN THE U.S.A.: The aerial view of the newly-opened Mackinac Suspension Bridge is taken from the upper peninsula in St. Ignace. The bridge across the Mackinac Straits, including the approach spans, is nearly five miles long.

LAYING THE FLOOR OF THE BRIDGE: The fast-working P and H Model 555A 35-ton-capacity truck crane is being used to lay the flooring of pre-formed steel sections. Each of the stiffening truss units weighs 100 tons.

THE MACKINAC BRIDGE IS COMPLETED

The new suspension bridge across the Mackinac Straits, in Michigan, linking Mackinaw City and St. Ignace, was opened to traffic earlier this month. It is nearly five miles long and has four traffic lanes. Between the two 552-ft.-high main towers out in mid-stream the roadway is 185 ft. above the water. The stiffening steel truss units which provide the basis for the roadway of the bridge are supported by steel wire suspender ropes from the two main cables, each of which is 2 ft. in thickness. They have been spun from 41,000 miles of galvanised wire.

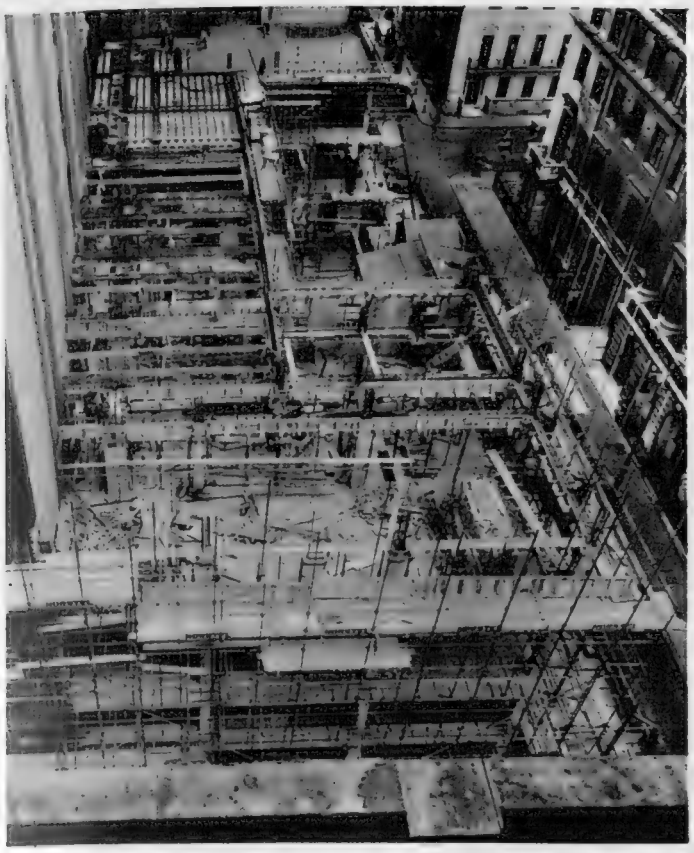
There are eighty-six pre-assembled steel stiffening truss units, and each one had to be raised in position separately. Floating the 100-ton sections to the assembly points on the bridge was a delicate operation requiring almost perfect surface and weather conditions. When the barge conveying the unit was in position, the steel section was raised by lifting struts on the main cables and fixed to the main suspender wires. Later the bridge flooring, composed of pre-formed steel sections, was laid by truck cranes. The new bridge, which has been built by the United States Steel Corporation's American Bridge Division, replaces a ferry-boat service across the Straits. Where it took an hour for each crossing of the Straits by ferry, vehicles can now cross the bridge in about ten minutes or so.

PRESENT AND FUTURE IN AMERICAN GARDENS

An executive of the Simplicity Manufacturing Company, Wisconsin, stands between two of his company's recent developments. In the foreground is the "Wonder Boy" riding mower, which can, with a gang-mower combination, cut a 59-in. swath. It has a 4-h.p. single-cylinder engine and can mow an acre of average lawn in an hour. Behind is a glimpse of the future, the "Wonder Boy" X-100, a full-scale model for an all-purpose garden maintenance unit. This machine is so designed that it should mow, weed, feed, seed and spray the lawn, as well as haul equipment, plough snow and act as a golf caddie cart. The operator has all-weather air-conditioned protection, and is linked to his home by radio-telephone.

AMERICA'S NEW OFF-ROAD LOG-HAULER

A new log-hauler designed for working on rough skid trails has been introduced in the United States by R. G. LeTourneau, Inc., of Texas. The transporter is 45 ft. long and 14 ft. wide. It has a payload capacity of 30 tons, a maximum speed of 16 m.p.h. Because it is powered by electric motors geared directly to points where power is needed, the machine has no clutches, drive shafts, or other mechanical drives. The wide-base low-pressure tyres make it unnecessary for any springs between the bunks and the axles. The front axle is electrically steered and the two systems of brakes are either regenerative electrical braking for normal operational purposes or magnetically controlled multiple disc brakes for emergency stops and parking. This log transporter has been thoroughly proved in hauling 30-ton loads of mahogany over rough mud trails in the Philippines, and will soon be used in the United States.



On left—

HOTEL EXTENSION

The first of the two pictures reproduced on the left, taken from the roof of Grosvenor House Hotel, in Park Lane, shows work proceeding on the new wing of the hotel, while the second picture shows the completion of the wing. The extensions were opened recently by Mr. Peter Thorneycroft, Chancellor of the Exchequer. During the ceremony, Sir Charles Taylor, chairman of Grosvenor House, presented a cheque for £5,000 to Mr. Frank Taylor, chairman of the contractors, Taylor Woodrow Construction Limited. The contractors gained this bonus by completing the wing several weeks ahead of a tight schedule. The work started at the beginning of May with the demolition of a large house which occupied the site of the new wing. Above the first-floor level the extension contains two suites and ninety-two bedrooms. The accommodation below is devoted to offices and general services to the hotel. The construction of the frame is in reinforced concrete secured to the steel frame of the existing building.

A BRIDGE-TUNNEL

The completion of the Hampton Roads, Virginia, bridge-tunnel scheme brings to a climax one of America's most important new highway projects. It took more than 15,000 tons of steel to build the twenty-three sections of double-shell tubing which went to make up the trench-type underwater section of the scheme. The two-lane tunnel is the sixth longest underwater crossing in the world. It was built by the Merritt-Chapman and Scott Corporation, of New York, who also constructed two low-level approach bridges and two portal islands to form the new roadway which provides the first direct traffic link across the channel of Hampton Roads. The bridge-tunnel was designed by Parsons, Brinckerhoff, Hall and Macdonald, of New York. It links Norfolk and Portsmouth, on the south of Hampton Roads, with Hampton and Newport News, on the north. The underwater part of the scheme was carried out by lowering the sections of double-shell steel tubing into a dredged trench on the bed of Hampton Roads and locking them together. The sections, each about 300 ft. in length, consist of an octagon-shaped outer shell 37 ft. wide and a circular inner shell 33 ft. in diameter. When the first of the tubes was sunk, it was placed next to the north portal island constructed 3,250 ft. from the Hampton shore. To link the north and south portal islands and the underwater tunnel, two concrete approach bridges were constructed. Watertight cofferdams were built through the ends of the two islands to the ends of the first and last sections of the underwater tubing. The dammed area was then excavated and pumped out.

HAMPTON ROADS BRIDGE-TUNNEL: The roadway is an important link in the road improvements programme in Tidewater, Virginia. It provides the first direct traffic link between Hampton, on the north side of Hampton Roads, and Norfolk, on the south.

FLOATING THE TUNNEL TUBES INTO POSITION: The steel sections are moored to a quay near to where they were lowered into the water into a dredged trench and locked together. Each section is 300 ft. long and is lined with an inner ring of concrete.

The World of Books

ENERGY AND HUMOUR

The Lives of Bessie Braddock, M.P., and P. G. Wodehouse; General Kennedy's War Narrative; a Double Event by One Author; Novels and Short Stories

WITH our most dynamic woman Member of Parliament, there is one word that has no meaning and, as far as one can tell, no existence for her: the word is "doubt." For Mrs. Braddock, M.P., is a fighter, a whole-time (which means twenty-four hours a day) Socialist, a solid whirlwind of energy and a woman whose watchword is: "Do something about it—now!" Her biography, by Miss Millie Toole, is a brilliant piece of work that leaves one as admiring, as exhausted, as stimulated and as exasperated as by a contact with Mrs. Braddock herself, who, we are told, will read BESSIE BRADDOCK, M.P. (Robert Hale. 18s.) for the first time when it is published. I hope—and I mean this sincerely—that she enjoys it as much as I have and finds it as amusing and as friendly.

Across the other side of the world lives an elderly gentleman who is in every way that I can think of the complete antithesis of that vital force from Liverpool. Mr. P. G. Wodehouse—or Dr. Wodehouse as his publishers refer to him with some dignity and, I believe, accuracy—has written a volume which is very, very faintly autobiographical and wildly and funnily digressive. In the course of OVER SEVENTY (Herbert Jenkins. 16s.) Mr. Wodehouse touches lightly on the fact that he was born, has worked hard and now doesn't live in New York any more but in the countryside not far away, and for the rest leaves cold facts for far more amusing fancies. Very, very funny—and that is a recommendation in this day and age.

NO. 10, DOWNING STREET (Hutchinson. 25s.), with the best will in Mr. Hector Bolitho's world, cannot simply be the story of a house at one of the most famous addresses; it must also be—and in this case quite entertainingly is—the story of the people who had the right to live in it for long or short periods. Sir Winston Churchill has said that the place was "shaky and lightly built," and there speaks a man who knows, among other things, the difference between a good wall and a poor one. The house was built with the others in the street and its history begins in 1660 with the man whom Pepys called "so stingy a fellow I care not to see him," and continues to the present day.

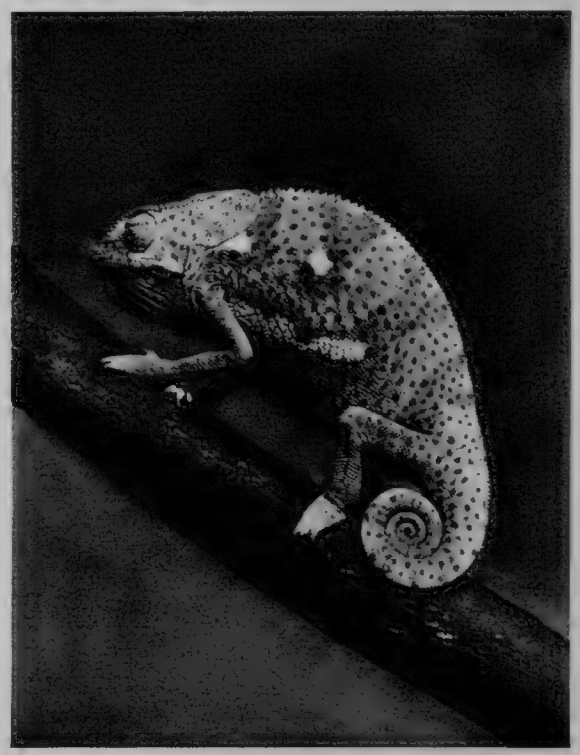
In Brigadier Bernard Fergusson's preface to THE BUSINESS OF WAR (Hutchinson. 25s.), by Major-General Sir John Kennedy, there is a phrase which is worth noting. The book consists of the war narrative of this distinguished soldier who was, from 1940 till the end of 1944, in a position to be the confidant of Ironside Dill and Brooke and was also in frequent contact with Mr. Churchill. Brigadier Fergusson writes that one lesson we can best learn from history is that "for the successful defence of our realms . . . we want the best quality of leaders . . . whether in uniform or plain clothes—or zip-suits." General Kennedy pays his tribute, too, to Churchillian guidance, but the chief interest of his book is in the vivid, day-to-day records of his conversations and War Office, sub-Cabinet experiences.

Field-Marshal Smuts, that great man, is on record in the last book as having said that "facts are the only things that matter. . . . Hitler has shown us that Hell is still here on Earth. . . . That is his service to the human race." In HITLER: THE MISSING YEARS (Eyre and Spottiswoode. 30s.), Putzi Hanfstaengl writes of the man he knew from the 1920s until 1937, when the author escaped to Switzerland. He gives a remarkably clear picture of the Munich politician and agitator when his power was still a thing of the future and when Hanfstaengl had the reputation of being his Court jester.

On the subject of Anglo-American relations, Mr. William Clark writes with good sense and a profound appreciation of the situations, past, present and future, which affect our friendships, alliances and temporary misunderstandings. LESS THAN KIN (Hamish Hamilton. 16s.) is, in a sense, the history of a partnership. It is a perceptive as well as an astringent study of two peoples who, whatever the slick opinion, have a great deal more than a language in common.

THE FRENCH IN ITALY (Chatto and Windus. 30s.) might have less immediate interest for the reader but nevertheless has its own fascination, for this is a review of Italy as it was between 1796 and 1799, lying in wait for the young Napoleon to come over the Alps. Mr. Angus Heriot writes as a scholar with the makings of a wit.

It is an odd thing that tales of far-off and long-ago crimes should be considered entertaining, but the fact is that, if well recounted, they may at least serve as a form of entertainment simply because they come so far outside everyday experience. SUDDENLY AT THE PRIORY (Heinemann. 25s.) is Mr. John Williams' reconstruction of the notorious Bravo case, in which a man was murdered by a poisonous dose of antimony at his big and then fashionable Balham house, in the 1870s. The mystery of the real guilt has remained unsolved and this volume has all the tension of a good "whodunit." There is even a possible solution thrown in on the very last page.



A FLAP-NECKED CHAMELEON: Movable scaly flaps at the rear of the head are a feature of this species. The picture is one of the 145 fine illustrations in colour in *Living Reptiles of the World*, by Karl P. Schmidt and Robert F. Inger (Hamish Hamilton. 63s.). Dr. Schmidt, who died very recently, was Curator of Zoology Emeritus at the Chicago Natural History Museum. Dr. Inger is Curator of Reptiles there. This book, containing altogether 266 photographs, gives an account of the history and behaviour of reptiles all over the world.

As a little footnote to Anglo-American friendship, it is worth noting that the numbers and the quality of novels this week are pretty well even on all counts. THE FORGOTTEN PLACE (Chatto and Windus. 15s.) is a story of the poor new times by Honor Croome. It is so photographically exact in its descriptions of a country house rescued from decay by a communal system of flats as to be thoroughly depressing if—and it is an essential "if"—it were not for the creativeness of the author's talent, and the tenderness with which she very obviously regards human beings.

ORPHAN'S PROGRESS (Secker and Warburg. 15s.) is by Mr. Angus Heriot, the author of the book on Napoleonic Italy which I mentioned before, but is in some contrast since it is a novel about a young man who, all unprepared, inherits a title and money in present-day London. Spasmodically witty and often funny. Mr. Heriot has brought off an impressive double event.

A GIRL AMONG POETS (Chapman and Hall. 13s. 6d.) is Mr. John Symonds' novel about the melancholy experiences in the life of a young woman whose hazardous policy is to be kind to poets and who finds it a highly demanding career. Everyone is tough in the sense of brass-bound self-sufficiency, and the book is, in effect, a very cogent argument in support of prose-writers.

Max Murray, who used to write good thrillers before his recent regretted death, wrote one "straight" novel which has just been published. TWILIGHT AT DAWN (Michael Joseph. 13s. 6d.) is about his native Australia and about a brave, kindly but desperate family living in the bush on short rations and a lot of optimism. Touching and very real in its impact.

From the United States comes, first of all, a novel about New York which, typically, is written by a man from the Middle West. Mr. Richard Bissell wrote the book from which the musical play *The Pajama Game* was made, and his new offering is about a man who wrote a novel from which a musical was made. SAY, DARLING (Secker and Warburg. 16s.) describes practically everything that happens after the author comes to the big city to collaborate on the script, and it is a good deal more hilarious than the entertainment that was finally produced.

THE VOICE AT THE BACK DOOR (Gollancz. 15s.) is about a present-day town in America's southern States and has been written by Miss Elizabeth Spencer with as much subtlety as force. It is haunting even more than readable and convinces even the far-away English reader of her authority and her deep familiarity with the subject.

BEST SELLER (Longmans. 15s.) is a brasher, lustier kind of affair, written by Mr. William Murray partly, one supposes, as a sardonic exposé of New York literary methods and partly as a Horrible Warning about true love versus Mammon, as represented severally by a nice girl and a group of literary racketeers. Very diverting.

A BIT OFF THE MAP (Secker and Warburg. 13s. 6d.) is Mr. Angus Wilson's new collection of short stories, the first, although, on reflection, not the most distinguished, of a rich new batch. It is typical, nevertheless, with its moments of brilliance and its passages of down-beat sentiment. PICK OF TO-DAY'S SHORT STORIES (Putnam. 15s.) has again been edited by Mr. John Pudney, who seems able to combine a poetical imagination on his own account with a finely discriminating sense of other writers' best work. Some of the twenty-five writers represented here have familiar names; others are newer discoveries and all of them are young.

A BOOK OF STORIES (Gollancz. 16s.) contains work by four different writers and all but one of the fifteen tales first appeared in the *New Yorker*: a common denominator which prepares one for the smoothness, the dryness, and the sophistication. WINTER'S TALES (Macmillan. 18s.) is the third edition of this excellent series and includes stories by twelve writers. SCOTTISH SHORT STORIES (Faber. 15s.) has been edited by Mr. Fred Urquhart, rearranged and increased from the original 1932 edition. Buchan, Linklater and Cunninghame-Graham are three of the big names here.

Vernon Fane

ANTARCTIC ENIGMA

The Life of Sir Ernest Shackleton

Sir Ernest Shackleton died of an attack of angina following a bout of influenza in 1922. When thus his famous voyage in the *Quest* came to an end and he was buried on South Georgia Island, he was already an almost legendary figure in South Polar exploration who had captured the imagination of the world. Margery and James Fisher, who have had access to Shackleton's hitherto unpublished papers, diaries and correspondence, among them most significant and moving letters to his wife, have written a dramatic narrative in presenting the real SHACKLETON (Barrie. 30s.). The authors have also interviewed many of the surviving participants in Shackleton's expeditions. It is a long biography, of over 500 close-knit pages, and it presents no clear-cut picture. As the authors say, there can be no standard interpretation of Shackleton; for each and every man who knew him has his own idea of what he was like, and each would defend his conception against any other. Perhaps the answer is that Shackleton was no textbook hero, and his biographers have not attempted to put his bewildering, interesting and impressive personality into any form of literary strait jacket.

Modern Calabria, consisting of the southern extremity of Italy, is a place of granite mountains, fertile coast strips producing wine, olive oil and fruit in abundance. Norman Douglas has lent fame to Old Calabria by his writings, but one cannot escape the thought that Eric and Barbara Whelpton have done almost equally well in their latest, amply-illustrated volume, CALABRIA AND THE ÆOLIAN ISLANDS (Robert Hale. 21s.). They have shown that this is still a little-known and lovely country with vast tracts remaining to be explored by the tourist, offering as it does sun, great stretches of golden sand washed by turquoise seas, and dramatic mountains capped with snow. The photographs the authors have brought back with them are magnificent, and so is their advice; they tell you not only where to stay but where not to.

Madge Garland, lately Professor of Fashion Design at the Royal College of Art, a fashion writer of elegance and distinction, has obviously enjoyed herself to the full in presenting THE CHANGING FACE OF BEAUTY (Weidenfeld and Nicolson. 42s.). Her theme is 4,000 years of beautiful women—draped, half-draped and undraped, luscious in their curves, pensive in their aspects of ever-changing perspective. This is a most ambitious effort, from a figure of 3,000 B.C. on the opening page to Marilyn Monroe on the last. Illustrations are the key, not least the cover design, which could hardly be more pointed.

Few ships in all history have ever done what H.M.S. *Exeter* did. She fought the *Graf Spee* with her brave companions in the Battle of the River Plate in December 1939. Three years later, on the other side of the world and still facing colossal odds, she received wounds which, to all intents and purposes, should have put her out of

LORD LYTTON REMEMBERS

Every week a new book assures us that the descendants of Byron, Bulwer Lytton and Wilfrid Blunt must write and usually can write. Blunt, it seems, is to become as popular a subject as Byron. This is borne out by THE DESERT AND THE GREEN, by Lord Lytton (Macdonald. 25s.). The author's memories of his Edwardian childhood were for me the most interesting part of his book. As a rifleman, he was clearly not cut to pattern. In soldiering he was jack of many trades and most of his book is devoted to his experiences in East Africa as an outback district officer. In this section he pays a warm tribute to Eric von Otter, a Swede who served in the K.A.R. and became a legend as hunter and administrator. He greatly influenced Lord Lytton, who never met him. Our methods of rough justice among the tribesmen are vividly described. His army career ended (and genealogically came full circle) among the Isles of Greece, fighting like his ancestor for the liberation of Greece. To-day he is happy in the West Country with a young family and the red deer of Exmoor. There are good things and sound reflections and exciting adventures in the book. If I venture a criticism, it is not confined to this book. As a reviewer, I notice a decline in what surely is a vital part of the craft of letters, careful proof-reading. Lord Lytton certainly should not have passed Owen Meredith and one or two more such glosses.

I confidently expect that Lord Lytton has not laid aside the hereditary pen. The peace and charm of Porlock Bay will not suffice to kill the urge or drown his memories of the Four-Power Government in Vienna. The challenge of the atomic age will carry across the Moor.

"A FUZZY YOUNG PERSON"

Napoleon, when he met Bettina Brentano in 1809, asked who was that fuzzy young person. In 1957, admitting a profound ignorance of Germany before 1914, I, too, asked for information which is supplied in BETTINA, by Arthur Helps and E. J. Howard (Chatto and Windus. 21s.). A portrait of her rather reminded me of Caroline Lamb, but Bettina was less mad, better educated and more practical than Caroline. Both of them cut the circles of famous men. Her father was an Italian businessman, her mother, Maximiliane de la Roche, was German and Protestant. Bettina and her sisters were educated at a convent. They made friends with Goethe's mother and met both Goethe and Beethoven. In 1811 Bettina married Achim von Arnim, a "Greek god" whom she did not love, though she bore him several children. The author of *Elizabeth and Her German Garden* in a later age married into the same family. She and Goethe became close friends and corresponded frequently. Her share of the correspondence proved her to have been extremely intelligent and a born letter-writer.

She was widowed in 1831 and next year Goethe died. Three years later appeared her book on Goethe, and suspicion that some of their correspondence had been "doctored" increased its success and her fame. A letter to Goethe describing Madame de Stael (page 90) is a good example of her vivid and humorous letter-writing. Later on, she had a long exchange with the rakish adventurer, Pückler-Muskau, and she dabbled in politics, Liberalism and romanticism, and in social reform on which her ideas were advanced and shrewd. She died in 1859, releasing her daughters to make lives for themselves. To the end she was regarded in Germany and outside as a phenomenon, an excrescence unrelated to her period. All her life she grasped at planets which she never touched. Her life story takes me into a *terra incognita* which I am too old now to explore.

John Gore

action. But *Exeter* continued, and she went out to fight the Battle of the Java Sea and to suffer defeat at the hands of immense Japanese forces. In FIGHT IT OUT (Kimber. 21s.) Captain Oliver Gordon tells this brave and wonderful story of his own command; he tells much more, of his long career at sea and his life in a Japanese prison camp, but the *Exeter* is the focal point of this tale.

If one can read of heroism unparalleled in the eastern seas, one must face, too, the degradation of war and its awful realism. In THE RISING SUNSET (Robert Hale. 15s.) Ken Attiwill records the experiences of 2,000 British prisoners of war in the Far East. It is a strange document, with the good emerging often where least expected. Amid man's inhumanity to man some surprisingly enlightened things can come to pass.

Who would want to go from Alaska to Tierra del Fuego? Helen and Frank Schreider were two with such an ambition. In LA TORTUGA (Secker and Warburg. 21s.) they give an account of this Pan American adventure. *La Tortuga* is an amphibious jeep, its owners are an intrepid, modest and delightful couple, and their story is not to be missed.

R. C. E.

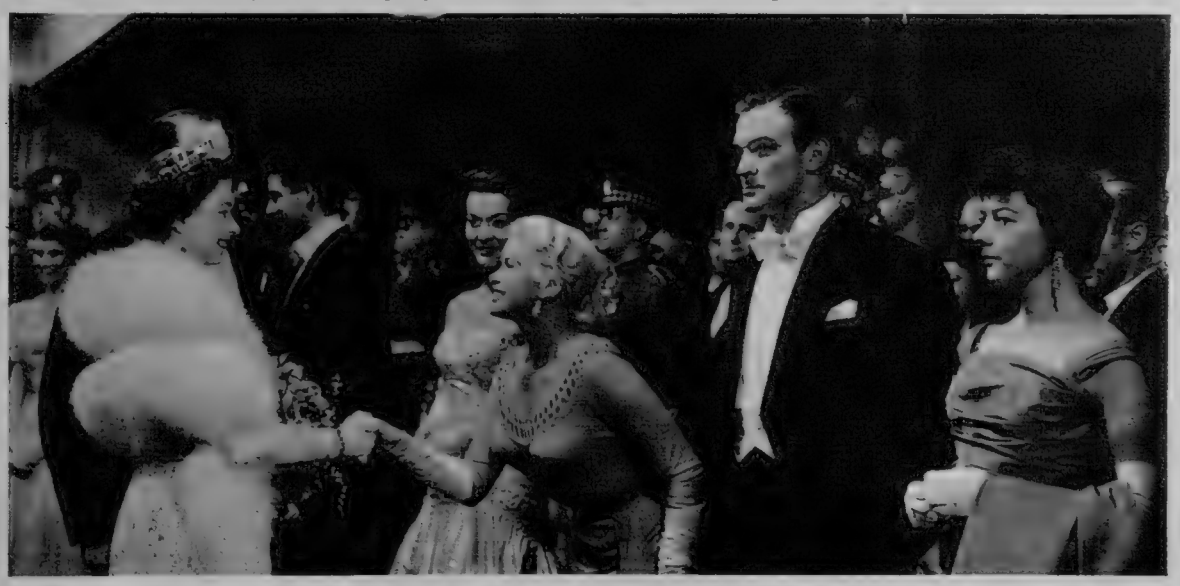
THE QUEEN AT THE ROYAL FILM SHOW

Several hundred people stood in the rain last week to see the Queen arrive at the Odeon Theatre, Leicester Square, for the Royal Film Performance. In the Royal party were Prince Philip and Princess Alexandra of Kent.

This year, the twelfth occasion on which the performance has been held in benefit of the Cinematograph Trade Benevolent Fund, the film chosen was Metro-Goldwyn-Mayer's *Les Girls*. Its stars, Mitzi Gaynor, Taina Elg, Gene Kelly and the British actress Kay Kendall, were not present.

Before the show Her Majesty was greeted by Lord Rank, the President of the Fund. Among fifteen film trade personalities presented to her was the veteran Hollywood director-producer, Cecil B. De Mille. In the stage show "Meet the Movie Makers" thirteen international stars took part, including Jayne Mansfield, Sophia Loren, William Holden, Jack Hawkins, Dorothy Tutin, Yvonne Mitchell and Tommy Steele. Kenneth More acted as compere. Afterwards the presentation of the artistes in the foyer was watched by the audience in the theatre on a big screen closed television circuit.

Les Girls is a musical, with music and lyrics by Cole Porter. Set in Paris, it is a sophisticated comedy of the familiar backstage variety, and is directed by George Cukor. Certain criticisms have been voiced at the selection of this film for the Royal Performance. However, most critics agree that *Les Girls* marks the return of Gene Kelly to his best form. It is also distinguished by the Hollywood debut of Kay Kendall, who made a notable impression some years ago in the British comedy picture *Genevieve*. She was married to Rex Harrison a few months ago.



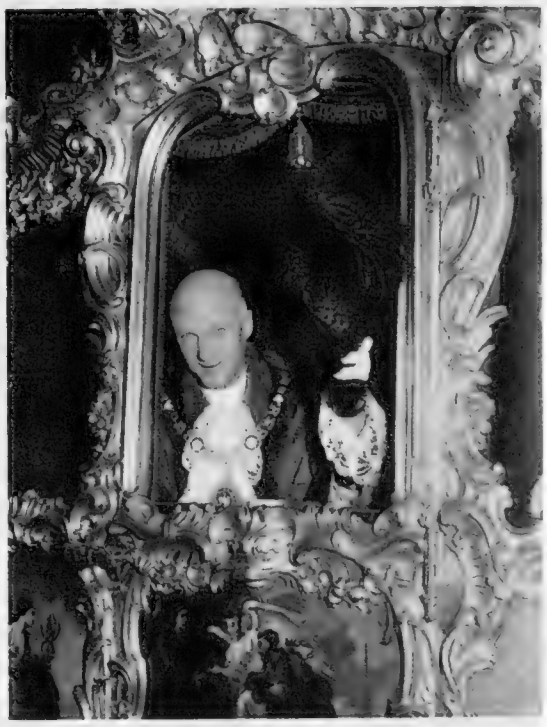
AN ACTRESS FROM HOLLYWOOD IS PRESENTED TO HER MAJESTY: After the Royal Film Performance in London Jayne Mansfield curtseys to the Queen. Between Her Majesty and Miss Mansfield are Michael Craig and Anne Heywood. On the right, awaiting presentation, are Stanley Baker and Dorothy Tutin. This year's choice of film was *Les Girls*, a comedy-musical.

LONDON'S WELCOME FOR THE NEW LORD MAYOR

A Day of Pageantry in the City with "Paper and Printing" as the Theme of the Show

VAST CROWDS THRONG THE CITY OF LONDON TO SEE THE LORD MAYOR'S SHOW: A general view of the procession showing the Lord Mayor's coach passing down Ludgate Hill while on its way to the Royal Courts of Justice, in the Strand, for the oath-taking ceremony. As Lord Mayor's Day this year fell on a Saturday the vast crowd in the City included thousands of schoolchildren. The theme of the procession was "Paper and Printing Keep the World Turning" and the fifteen decorated floats all illustrated the indispensability of printing in every facet of our daily life. In addition there were massed bands and detachments from the services. The new Lord Mayor, Alderman Sir Denis Truscott, had actually taken office on the previous day during a ceremony at Guildhall when he received the mace from the retiring Lord Mayor, Sir Cullum Welch.

PAPER AND PRINTING IN ADVERTISING: One of the tableaux in the procession illustrates this year's theme.



On right—
LONDON'S NEW LORD MAYOR: Alderman Sir Denis Truscott waves from his coach as he rides in the traditional procession to the Royal Courts of Justice to take the oath. Sir Denis, a vice-chairman of the A.A., was elected to the Court of Common Council for Ward of Dowgate in 1938. He was sheriff in 1951-52, and Master of the Worshipful Company of Vintners 1955-56.

On right—
THE TRADITIONAL BANQUET AT GUILDHALL: Among those standing on the left of the new Lord Mayor are the Prime Minister, Mr. Harold Macmillan; Lord Kilmuir, the Lord Chancellor; Lord Hailsham, the Lord President of the Council, and Mr. R. A. Butler, the Home Secretary. On the right of Sir Denis are Sir Cullum Welch; Dr. Fisher, Archbishop of Canterbury, and Mr. W. S. Morrison, Speaker of the Commons.

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FAST AND ECONOMICAL MOTORING

Debut of the Riley One-Point-Five; Another Useful A.A. Service; Reflections on the Motor Show; and Other Motoring News

By "THE SPHERE" MOTORING CORRESPONDENT

THE long-awaited Riley One-Point-Five four-seater saloon has made its appearance and the reaction of the motoring public has been mixed. Many dyed-in-the-wool Riley fans are frankly disappointed—not with the car's performance, but with its appearance. "Too much like the Wolseley 1500," they are saying, and I agree with them. Under their rationalisation policy the British Motor Corporation have indeed used the same body as for the Wolseley 1500, but I think they could have—and should have—made it look more distinctive. This could have been done most effectively by more imaginative frontal treatment. I applaud the decision to retain the traditional Riley radiator shape, but it is part of a general design which is altogether too reminiscent of the new Wolseley, especially when seen from a distance. It is not only the body shell that has been borrowed from the Wolseley by the new Riley. Everything else is the same, too, except for a higher compression ratio (8.3:1 instead of 7.25), the use of twin S.U. carburettors, the facia layout and one or two minor features. Really, I suppose, the Riley is a de luxe edition of the Wolseley.

Its moderate price of £863 17s. is only £67 10s. more than the Wolseley. It is cheaper, I notice, than the Morris Oxford and the new Standard Ensign—yet a top speed of 90 m.p.h. is claimed. In third gear, claim the makers, you can do 80 m.p.h. before the valves start bouncing. I confess I did not reach these speeds in a short test in Oxfordshire, but I was handicapped by wet roads. I think you can regard the new Riley as a genuine 85-m.p.h. car in which you can quickly get up to 70 m.p.h. in third. "Quickly" is the operative word.

A FAST AND ECONOMICAL TOURING SALOON: The new Riley One-Point-Five offers a sports-car performance with saloon comfort and low running costs. The B.M.C. "B" Series 4-cylinder engine of 1,489 c.c. develops 68 b.h.p. at 5,400 r.p.m. with a compression ratio of 8.3 : 1.

The new Riley is indeed a lively car. It is a delight to drive, with a gear-box calculated to gladden the heart of even the most prejudiced Riley fan. The synchromesh mechanism simply cannot be caught out, and the remote-control gear-change lever, right in the middle of the floor, is a joy to use. My only two criticisms would be that the lever could, with advantage, be a couple of inches longer and that there is too much of a gap between the second and third ratios. The engine, which develops 68 b.h.p. at 5,400 r.p.m., is the 1,489 c.c. B.M.C. "B" series unit. With its twin carburettors and high compression ratio, it is exactly the same engine that is fitted in the M.G. Magnette.

The old 1½-litre Riley went out of production in 1955 and its successor is the first Riley ever to discard the conventional chassis frame and go in for integral construction. Its excellent road-holding, cornering and steering owe much to the Morris Minor, and the designers have seen to it that the brakes are more than a match for the car's exuberant performance. Independent springing of the front wheels is effected by long torsion bars. Rack-and-pinion steering gives sensitive, precise directional control, but the off-set steering column takes a bit of getting used to. You can recapture the old Riley atmosphere more when you get inside this car than when you are outside studying its lines. Polished walnut veneer is used for the facia and door panels. There are pile carpets and real leather is used for the upholstery. A tachometer in a first-class position enables the connoisseur driver to keep an eye on the engine revs.

The safety features include a "dished" steering-wheel and sponge-rubber protection rails above and below the facia. The comfortable bucket seats at the front are easily adjustable and give good support when cornering at a fast speed. I liked the position of the central handbrake, the car's small turning circle and the layout of the control pedals—a point that is not always studied as carefully as it should be.

A heater and screen-washers are standard fittings. The rear seat squab tilts forward to give access to the boot from inside the car. Any faults? A few minor ones. The starter switch should be combined with the ignition control; the heavy boot lid should be counterbalanced to make things easy for the housewife; and the petrol-tank should be larger than 7 gallons in this type of car. The high top gear—3.73 : 1—is really a built-in overdrive unit. It permits fast cruising at relatively low engine speeds and helps to give an overall petrol mileage figure of nearly 35 to the gallon. Tests have shown that the new Riley does 40 m.p.g. at a constant 50 m.p.h. and 34.5 m.p.g. at a steady 60 m.p.h.

In co-operation with the Post Office, the A.A. have introduced yet another useful service for motorists which will have an important bearing on road safety. Motorists in London, Birmingham, Manchester and Liverpool may now dial ASK 6611 to get an A.A. report on the state of the roads—from the weather aspect—within a radius of 50 miles from the centre of these cities. In Glasgow, Edinburgh and Cardiff the same service is available by dialling 938.

I went along to A.A. headquarters in London the other day to see Mr. Ernest Marples, the Postmaster-General, inaugurate this new service, which will be particularly useful when bad weather causes roads to be affected by snow, ice, fog or floods. As Mr. Marples pressed a button we heard, from a loudspeaker, the road report which any London motorist was given that day if he rang ASK 6611. Mr. Marples himself had recorded it earlier that morning at the Holborn Exchange. This is the latest addition to the G.P.O.'s "dial" service, other examples of which are TIM, which you dial when you want to know the time, and the Test match scores.

The P.M.G. was welcomed to Fanum House by Sir Lancelot Joynson-Hicks, the new chairman of the A.A., who said that the new dial service was a form of automation. It would save A.A. members from irritating telephonic delays in getting a road report in bad weather, for on some days the A.A.'s main switchboard had to cope with 10,000 weather calls. Foreknowledge of icy conditions could often prevent accidents. It is hoped to extend this weather service to other towns. It will operate only in the winter or in an emergency. The discs will be changed as often as the conditions require.

A LUNCHEON FOR A FAMOUS RACING TEAM: Sir William Lyons (centre), Chairman of Jaguar Cars Ltd., shakes hands with Mr. David Murray, patron of Ecurie Ecosse racing team, the members of which were the guests of Sir William at a recent luncheon. Sir William presented Mr. Murray with a bronze statuette of a Jaguar, on a marble base, in recognition of the team's success at Le Mans where, for the second year in succession, it won the International twenty-four-hour race. On the right is Mr. W. E. Wilkinson, who prepares the team's cars.

The London Motor Show attracted 483,427 paying visitors. That was 2.3 per cent. down on 1956. It compares with a figure of 613,000 in the record Show year—1953—but was considered very satisfactory in view of the paucity of brand-new models and the prevalence of influenza. More of the cars on show were finished in two colours than in previous years, according to a survey by Imperial Chemical Industries. And, they say, the duo-tone finishes were more cleverly harmonised with car design.

Almost half the 313 cars on view were finished in two colours. Only 4 per cent. were all-black. "The use of duo-tones as an integral part of the design of car coachwork was noticeable for the first time last year," says the I.C.I. report. "This year two-tone colouring themes, composed of a wide variety of gay and attractive colours, were a feature of the Show. Where the main coachwork was in one colour, the second colour had been used imaginatively in many different ways: on the roof, as a streamlined midriff streak or as a mass in a small area." This interesting analysis does not, of course, necessarily reflect the tastes of the motoring public. They merely show the way the manufacturers are thinking for display purposes. Blacks and greys are still much more popular with the cash customers than was apparent from the Show specimens.

I was interested, during the Show, to see a demonstration of a British-designed car refrigerating system working on the same principle as that employed by many kitchen "fridges." It has been developed by Smiths Motor Accessories Ltd., and is intended for use as original equipment—not for a motorist to buy and install in his car. It will probably cost around £100 as an optional extra. There may not be much call for car refrigeration among motorists in Great Britain, but it will be valuable for British cars on sale in many export markets. It is well known that the overseas sales of British cars has been hampered in a number of countries with hot climates because up to now British manufacturers have not bothered about refrigeration. The system evolved by Smiths is sixty times as powerful as the average domestic fridge. It has been designed to reduce a car's inside temperature by 25 degs. Fahrenheit. This is equivalent to the cooling effect of 4,000 lb. of ice melting in the course of twenty-four hours.

When the Guild of Motoring Writers held their Motor Show Test Day at Goodwood, Sussex, for the convenience of foreign journalists and the benefit of the motor industry, the Guild's president, the Duke of Richmond and Gordon, announced that he is carrying out improvements to his Goodwood racing circuit this winter at a cost of between £15,000 and £20,000.

The improvements include an 11-ft.-wide vehicle tunnel under the track, a second tunnel for pedestrians, a new car park for members of the British Automobile Racing Club, with room for 1,300 cars, a new spectators' enclosure inside the track and two grass landing-strips for light aircraft in the centre of the circuit. The paddock area is to be redesigned and there will be a wide grass lane inside the circuit over which members will be able to drive to various vantage-points. This should make "picnic parking" popular. The vehicle tunnel will afford uninterrupted access to the paddock for competitors and will also enable spectators to drive to the central car park, even if racing has begun, when they arrive.

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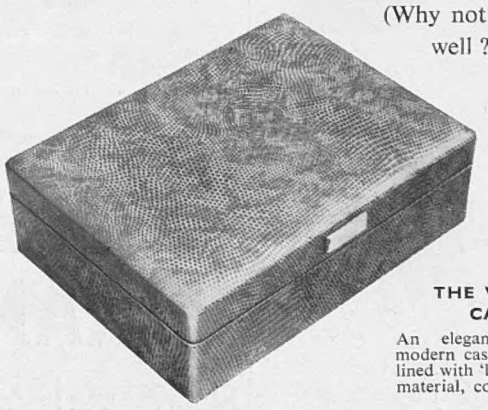

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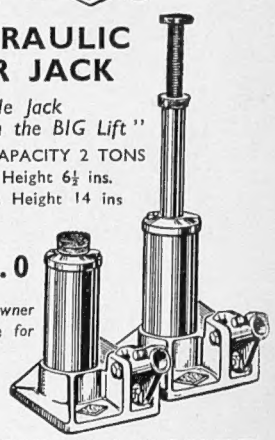

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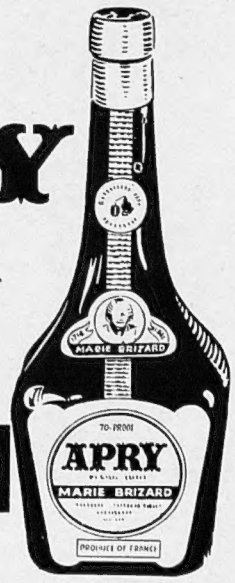

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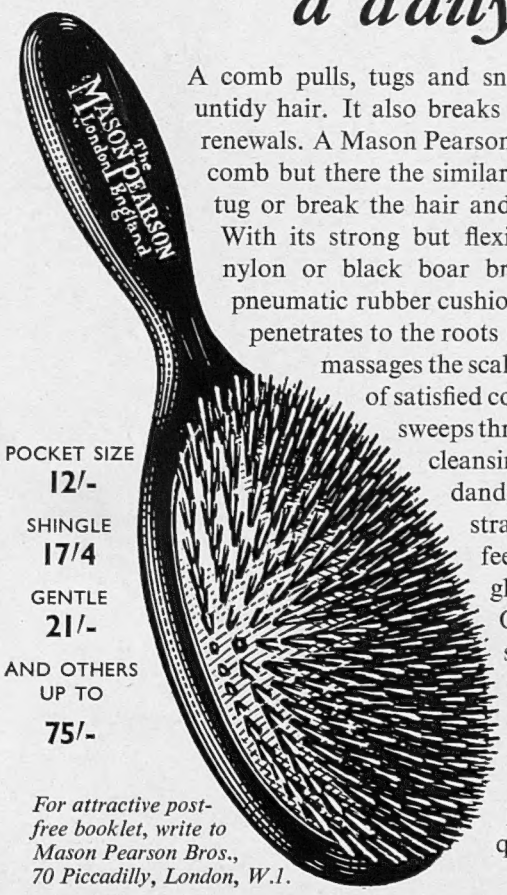

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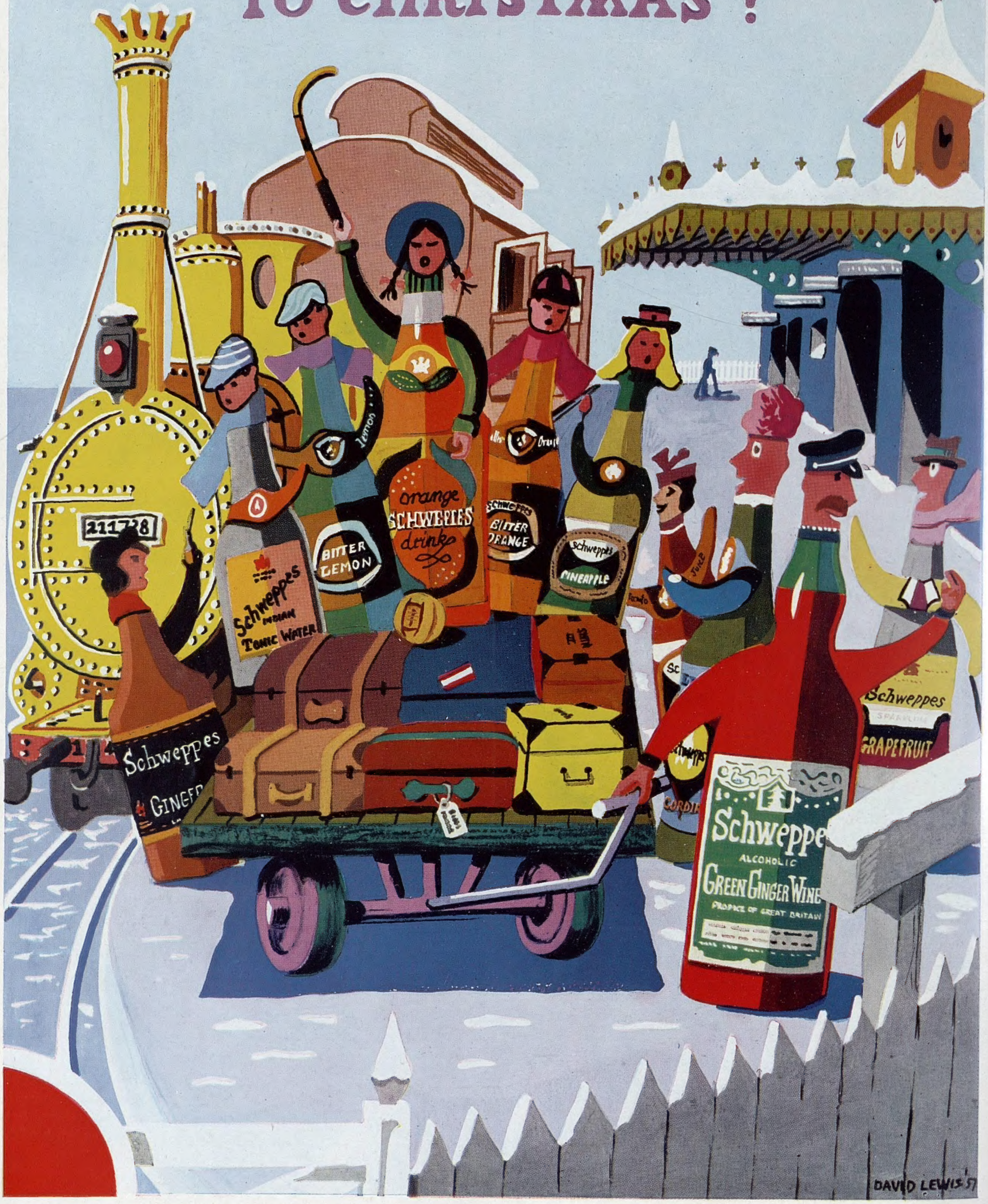

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